Service Manual

SA1/ F1N, /N1G, /U1G

Super Audio CD Player

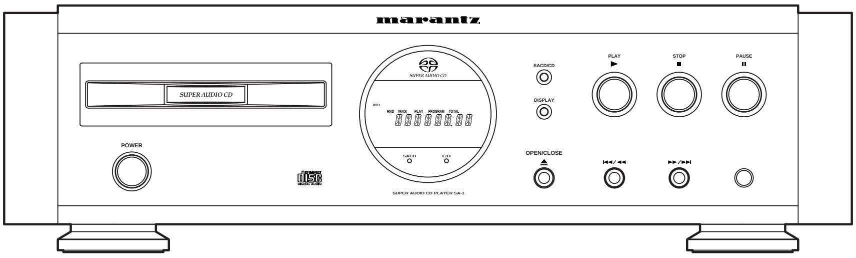


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Please use this service manual with referring to the user guide (D.F.U.) without fail.
修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

marantz®

SA-1

392K855010 MIT
3120 785 22320
First Issue 2000.12

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, **MARANTZ** company has created the ultimate in stereo sound. Only original **MARANTZ** parts can insure that your **MARANTZ** product will continue to perform to the specifications for which it is famous.

Parts for your **MARANTZ** equipment are generally available to our National Marantz Subsidiary or Agent.

ORDERING PARTS :

Parts can be ordered either by mail or by Fax.. In both cases, the correct part number has to be specified.

The following information must be supplied to eliminate delays in processing your order :

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which part is required
5. Way of shipment
6. Signature : any order form or Fax. must be signed, otherwise such part order will be considered as null and void.

USA
MARANTZ AMERICA, INC.
440 MEDINAH ROAD
ROSELLE, ILLINOIS 60172
USA
PHONE : 630 - 307 - 3100
FAX : 630 - 307 - 2687

EUROPE / TRADING
MARANTZ EUROPE B.V.
P.O.BOX 80002, BUILDING SFF2
5600 JB EINDHOVEN
THE NETHERLANDS
PHONE : +31 - 40 - 2732241
FAX : +31 - 40 - 2735578

BRAZIL
PHILIPS DA AMAZONIA IND. ELET. ITDA
CENTRO DE INFORMACOES AO
CEP 04698-970
SAO PAULO, SP, BRAZIL
PHONE : 0800 - 123123(Discagem Direta Gratuita)
FAX : +55 11 534. 8988

PROFESSIONAL **AMERICAS**
SUPERSCOPE TECHNOLOGIES, INC.
MARANTZ PROFESSIONAL PRODUCTS
2640 WHITE OAK CIRCLE, SUITE A
AURORA, ILLINOIS 60504 USA
PHONE : 630 - 820 - 4800
FAX : 630 - 820 - 8103

PROFESSIONAL **AUSTRALIA**
TECHNICAL AUDIO GROUP PTY, LTD
558 DARLING STREET,
BALMAIN, NSW 2041,
AUSTRALIA
PHONE : 61 - 2 - 9810 - 5300
FAX : 61 - 2 - 9810 - 5355

CANADA
LENBROOK INDUSTRIES LIMITED
633 GRANITE COURT,
PICKERING, ONTARIO L1W 3K1
CANADA
PHONE : 905 - 831 - 6333
FAX : 905 - 831 - 6936

AUSTRALIA
QualiFi Pty Ltd,
24 LIONEL ROAD,
MT. WAVERLEY VIC 3149
AUSTRALIA
PHONE : +61 - (0)3 - 9543 - 1522
FAX : +61 - (0)3 - 9543 - 3677

THAILAND
MRZ STANDARD CO.,LTD
746 - 754 MAHACHAI ROAD.,
WANGBURAPAPIROM, PHRANAKORN,
BANGKOK, 10200 THAILAND
PHONE : +66 - 2 - 222 9181
FAX : +66 - 2 - 224 6795

SINGAPORE
WO KEE HONG DISTRIBUTION PTE LTD
130 JOO SENG ROAD
#03-02 OLIVINE BUILDING
SINGAPORE 368357
PHONE : +65 858 5535 / +65 381 8621
FAX : +65 858 6078

NEW ZEALAND
WILDASH AUDIO SYSTEMS NZ
14 MALVERN ROAD MT ALBERT
AUCKLAND NEW ZEALAND
PHONE : +64 - 9 - 8451958
FAX : +64 - 9 - 8463554

TAIWAN
PAI- YUING CO., LTD.
6 TH FL NO, 148 SUNG KIANG ROAD,
TAIPEI, 10429, TAIWAN R.O.C.
PHONE : +886 - 2 - 25221304
FAX : +886 - 2 - 25630415

MALAYSIA
WO KEE HONG ELECTRONICS SDN. BHD.
SUITE 8.1, LEVEL 8, MENARA GENESIS,
NO. 33, JALAN SULTAN ISMAIL,
50250 KUALA LUMPUR, MALAYSIA
PHONE : +60 3 - 2457677
FAX : +60 3 - 2458180

JAPAN *Technical*
MARANTZ JAPAN, INC.
35- 1, 7- CHOME, SAGAMIONO
SAGAMIHARA - SHI, KANAGAWA
JAPAN 228-8505
PHONE : +81 42 748 1013
FAX : +81 42 741 9190

日 本 マ ラ ン ツ 株 式 会 社
本　社　〒228-8505
神奈川県相模原市相模大野7-35-1
営業本部　〒150-0022
東京都渋谷区恵比寿南1-11-9

KOREA
MK ENTERPRISES LTD.
ROOM 604/605, ELECTRO-OFFICETEL, 16-58,
3GA, HANGANG-RO, YONGSAN-KU, SEOUL
KOREA
PHONE : +822 - 3232 - 155
FAX : +822 - 3232 - 154

SHOCK, FIRE HAZARD SERVICE TEST :

CAUTION : After servicing this appliance and prior to returning to customer, measure the resistance between either primary AC cord connector pins (with unit NOT connected to AC mains and its Power switch ON), and the face or Front Panel of product and controls and chassis bottom.

Any resistance measurement less than 1 Megohms should cause unit to be repaired or corrected before AC power is applied, and verified before it is return to the user/customer.

Ref. UL Standard No. 1492.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

001120MIT

1.1 TECHNICAL SPECIFICATIONS

	Super Audio CD	CD
Audio Characteristics		
Channels	2channels	2channels
Frequency range	2 Hz - 100 kHz	2 Hz - 20 kHz
Frequency characteristics	2 Hz - 50 kHz (-3 dB)	2 Hz - 20 kHz
Dynamic range	109 dB	98 dB
THD (1 kHz)	0.0012 %	0.0015 %
wow & flutter	Precision of quartz	Precision of quartz
Analog output		
output level (unbalanced)	2.2 V	2.4 V
output level (balanced)	4.4 V	4.8 V
Digital output		
output level (cinch JACK)	-	0.5 Vp-p (75 ohm)
output level (optical)	-	-19 dBm
Optical Readout System		
Laser	AlGaAs	AlGaAs
Wave length	650 nm	780 nm
Sampling frequency	2.8224 MHz	44.1 kHz

Power Supply

F version .... AC 100 V 50/60 Hz
N version .... AC 230 V 50 Hz
U version .... AC 120 V 60 Hz
Power Consumption .... 33 W

Cabinet, etc.

Dimensions (Width x Height x Depth) .... 458 x133 x 365 mm
Net weight .... 17.7 kg
Operating temperatures .... +5 ℃ ~ +35 ℃
Operating humidity .... 5 % ~ 90 % (without dew)

Accessories

Remote control unit (RC-1SA) 1
Dimensions (Width x Height x Depth) .... 44 x 17.5 x 239 mm
Net weight (without Batteries) .... 175 g
AAA (R03) Batteries 2
Stereo audio cable with cinch pins 1
AC Power Cord 1
User's Guide 1

Specifications subject to change without prior notice.

1.2. TEST MODE

1. How to enter the initial test mode

Turn the power on, press the SACD/CD button and the track down button more than two seconds.

Display: F 0 TEST

2. Version check mode

1 Press the SACD/CD button to enter this mode.

Display: 1 0 9 0 9 2 8

Year/Month/Day

2 Model number (Press the PLAY button in the step 1 .)

Display: 1 0 0 0 0 1 0

Model number

3 Version (Press the PLAY button in the step 2 .)

Display: 1 0 A 0 0 0 1

Version number

4 Then press the PLAY button to return to the initial test mode.

Display: F 0 TEST

3. Laser test mode

1 Press the PAUSE button to enter this mode.

(In case of the no disc mode, eject the tray.)

Display: 3 0 0 0 0 0 0

2 Enter the laser test mode.

Display: 3 1 0 0 0 0 0

3 CD laser lit up (Press the STOP button in the step 2 or 4.)

Display: 3 1 0 0 0 0 0

4 SACD laser lit up (Press the PAUSE button in the step 2 or 3.)

Display: 3 1 0 0 0 0 0

5 Laser test mode completed (Press the PLAY button in the step 2, 3 or 4.)

Display: F 0 TEST

4. FIP test

1 Press the PLAY button to enter this mode

Display: All lamps lit up.

2 Press the PLAY button again to return to the initial test mode

Display: F 0 TEST

5. How to exit the test mode

In case of finish the test mode, press the mains switch (POWER button)

■テストモード

１．テストモードの入り方

電源を入れ、SACD／CDボタンとスキップ戻しボタンを２秒以上押し続ける。

表示………　ＦＯ　TEST（テストモード初期状態）

2．バージョンチェックモード

テストモード初期状態からSACD／CDボタンを押すことによりこのモードに入る

① プログラム日付

表示………　１０９０９２８：年　月　日

② モデルナンバー（①でPLAYボタンを押す）

表示………　１０００００１０：モデルナンバー

③ バージョン（②でPLAYボタンを押す）

表示………　１０Ａ０００１：バージョンナンバー

④ 次にPLAYボタンを押すとテストモードの初期に戻る

表示………　ＦＯ　TEST

3．レーザテストモード

テストモード初期状態からPAUSEボタンを押すことによりこのモードに入る。

① トレイがイジェクされた場合、OPEN/CLOSEボタンを押しトレイをクローズさせる。

表示………　３００００００

② レーザテストモード（①でSTOPボタンを押す）

表示………　３１０００００

③ CDレーザ点灯（②, ④でSTOPボタンを押す）

表示………　３１０００００

④ SACDレーザ点灯（②, ③でPAUSEボタンを押す）

表示………　３１０００００

⑤ レーザーテストモード終了（PLAYボタンを押す）

表示………　ＦＯ　TEST

４．ＦＩＰテスト表示

テストモード初期状態からPLAYボタンを押すことによりこのモードに入る。

表示………　全点灯

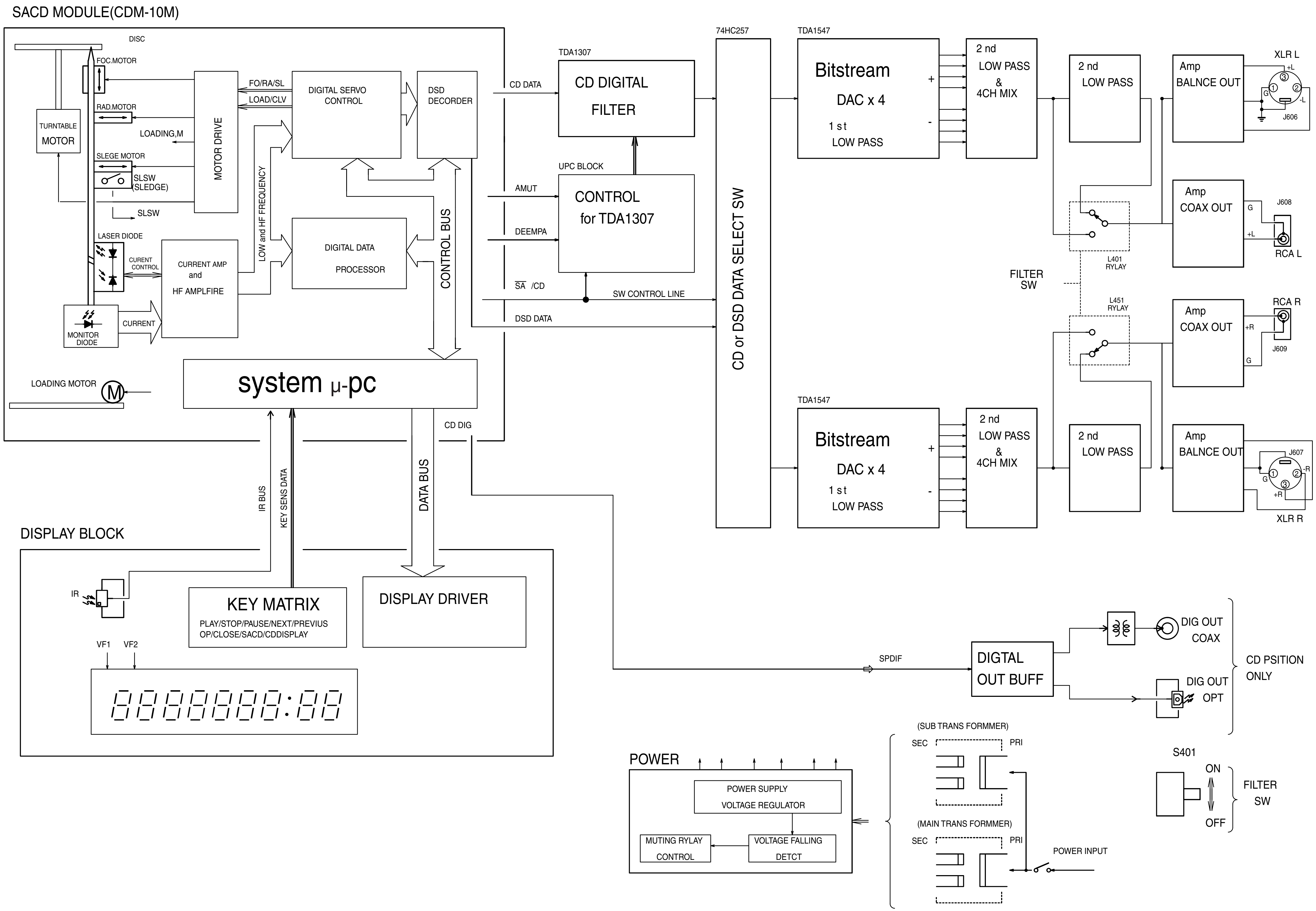
再度PLAYボタンを押すとテストモード初期状態に戻る。

表示………　ＦＯ　TEST

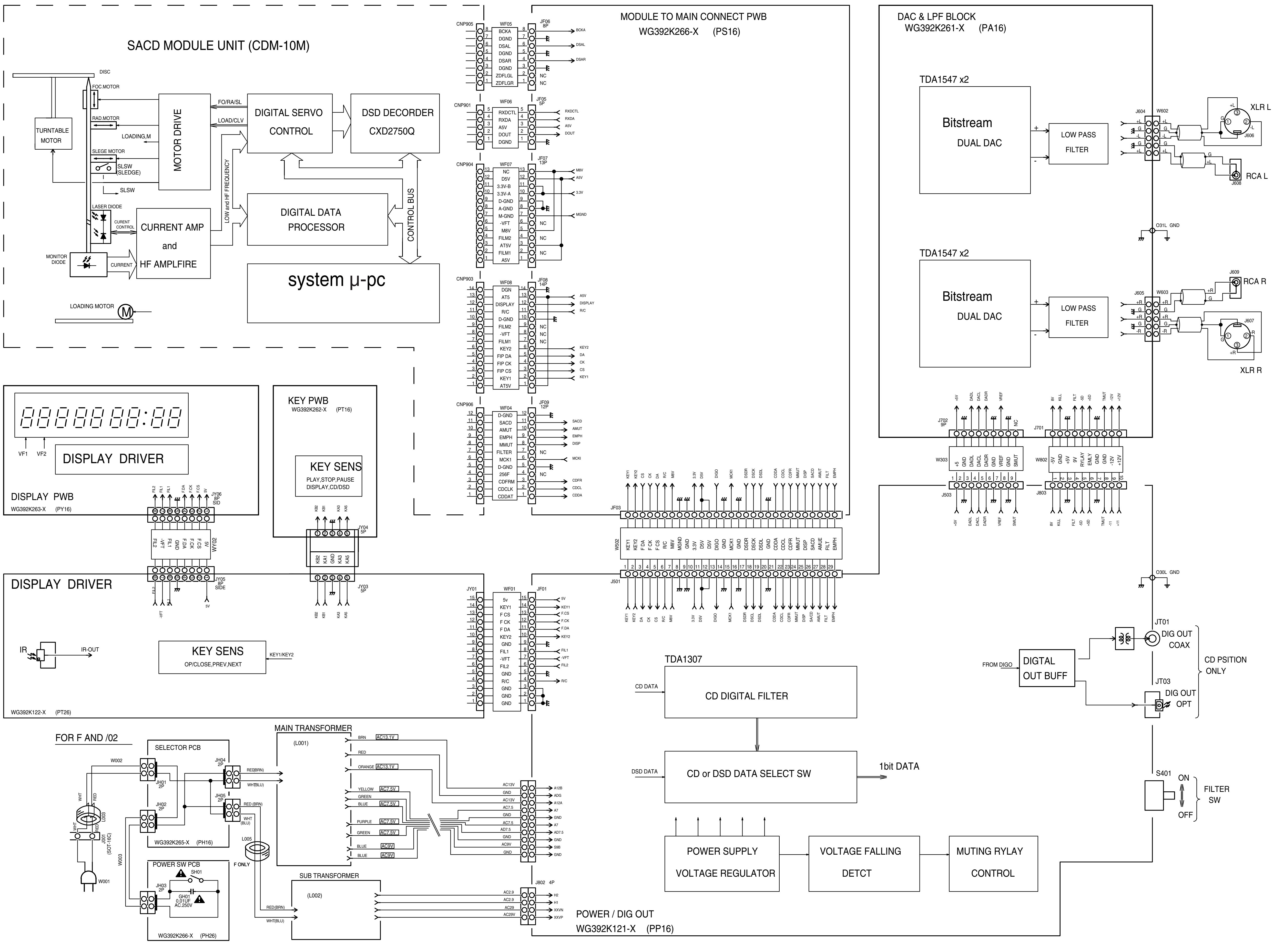
5．テストモード終了

テストモードを終了するには、ＰＯＷＥＲボタンを押して電源を切る。

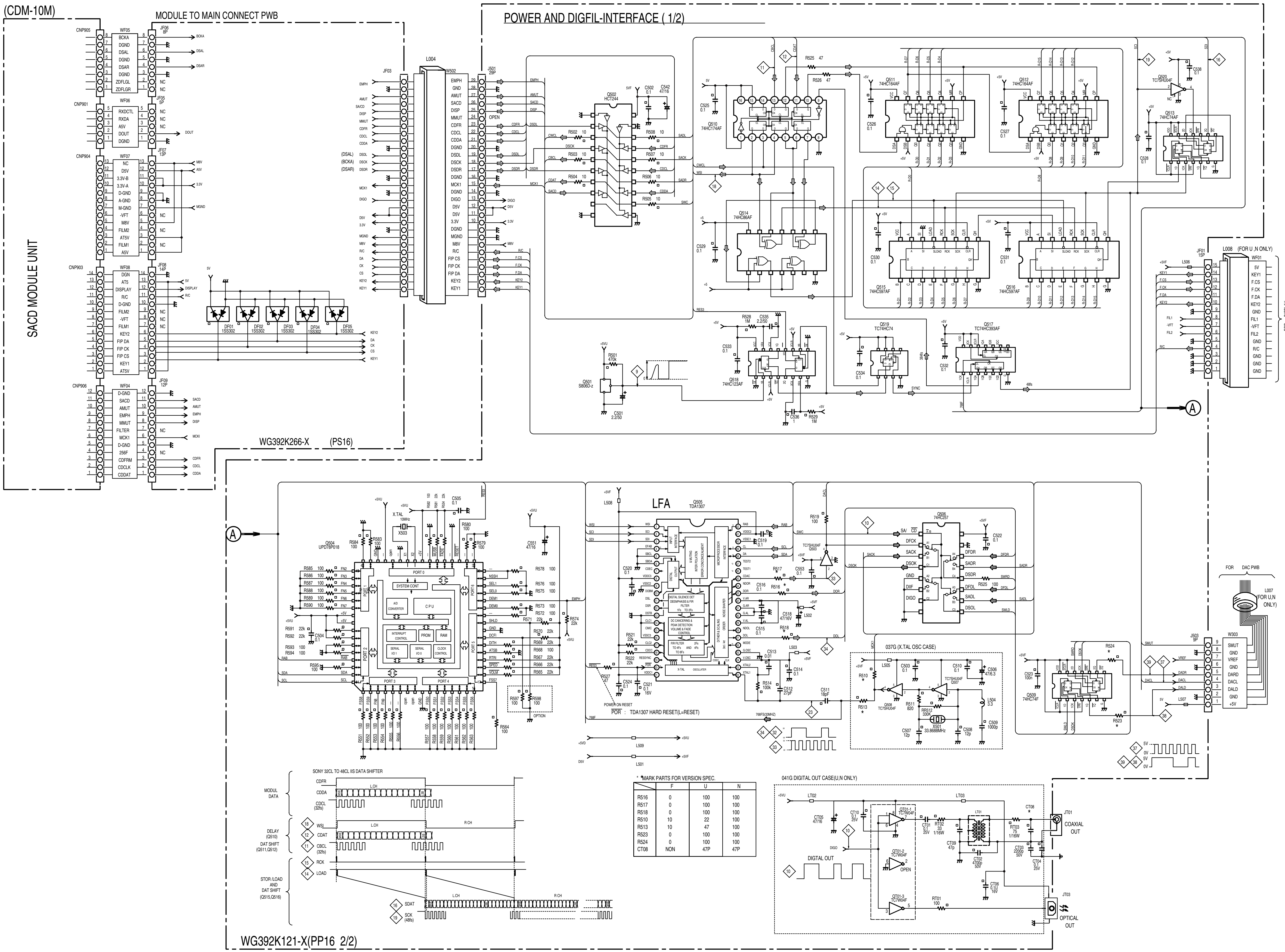
1.3 BLOCK DIAGRAM



1.4 WIRING DIAGRAM

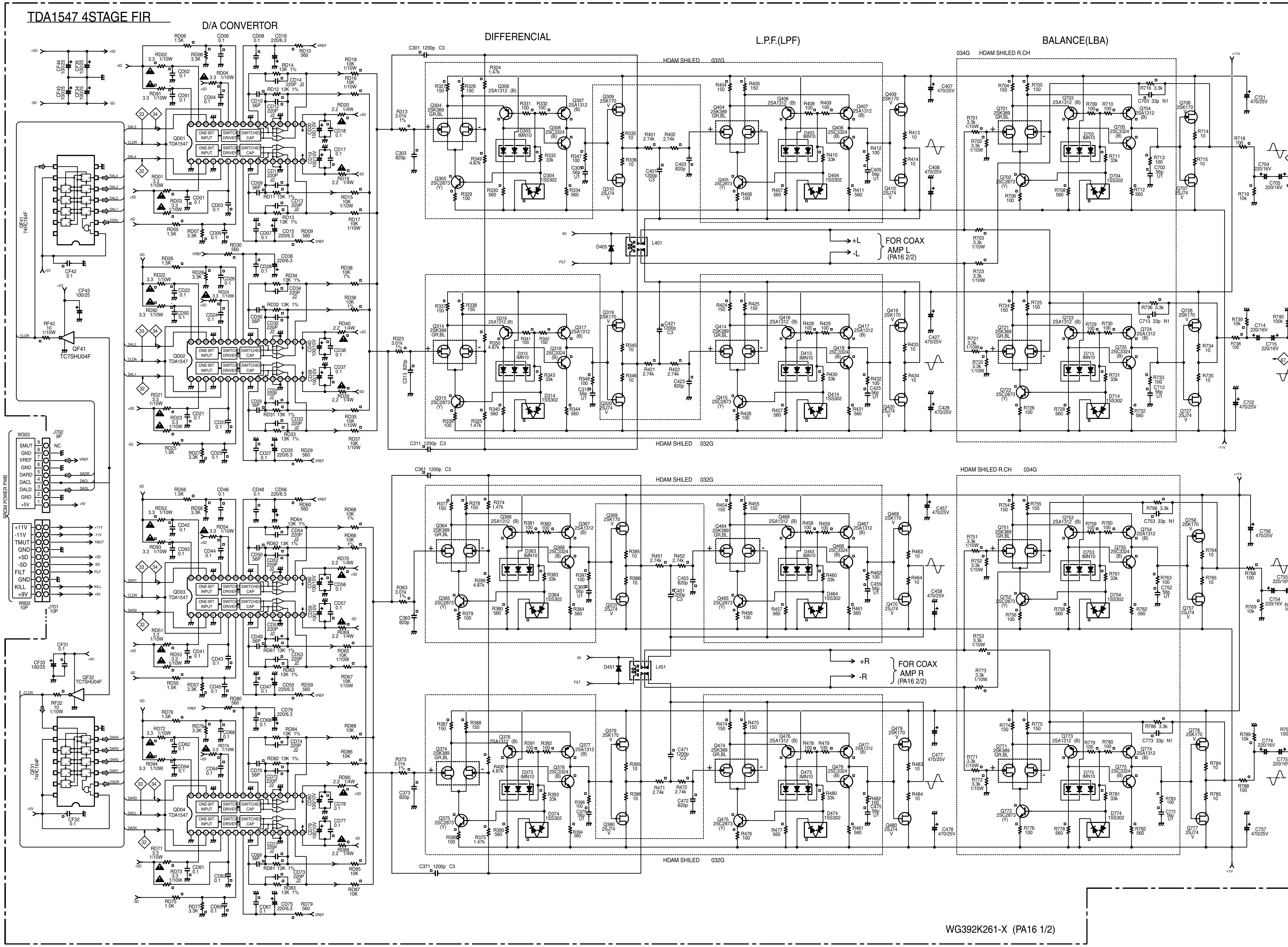


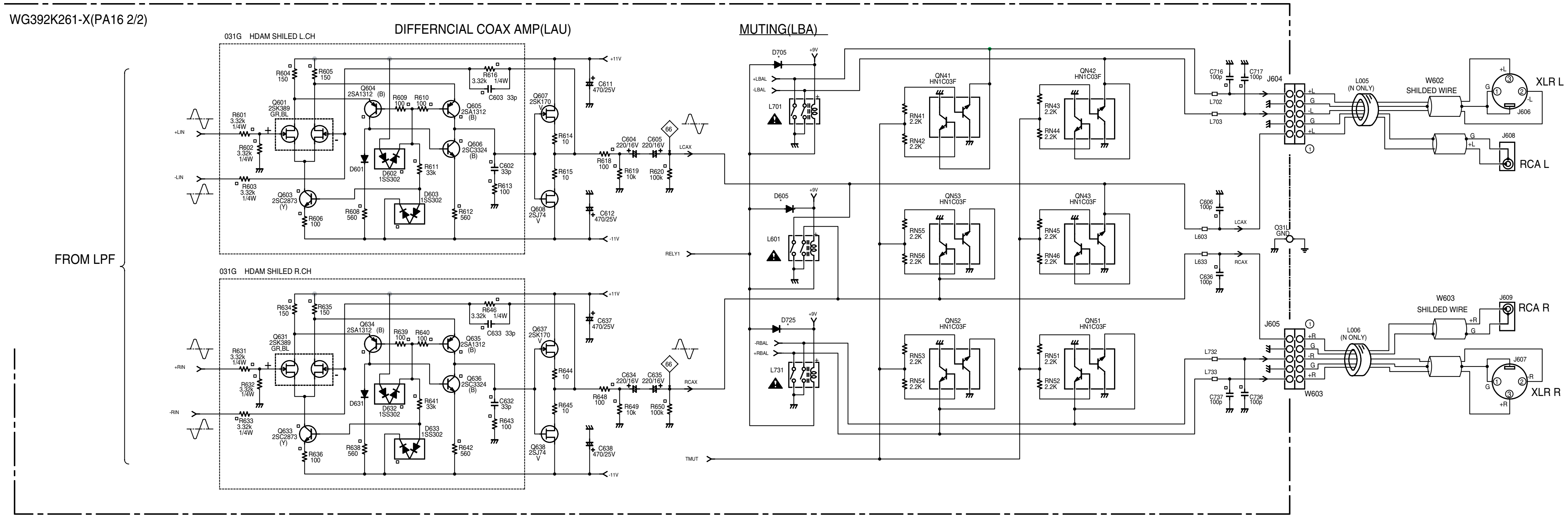
1.5 SCHEMATIC DIAGRAM

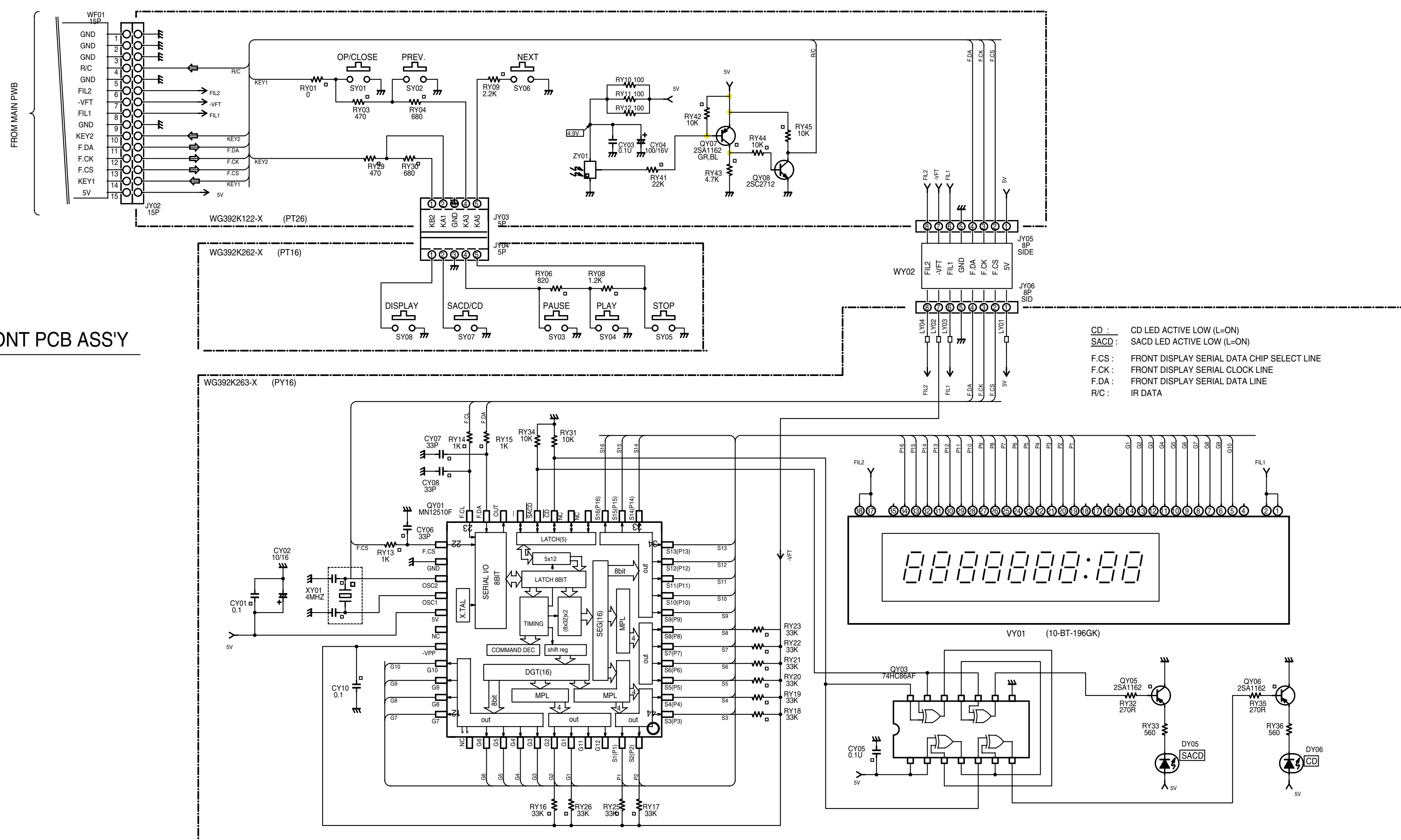


" *MARK PARTS FOR VERSION SPEC.

	F	U	N
R516	0	100	100
R517	0	100	100
R518	0	100	100
R510	10	22	100
R513	10	47	100
R523	0	100	100
R524	0	100	100
CT08	NON	47P	47P

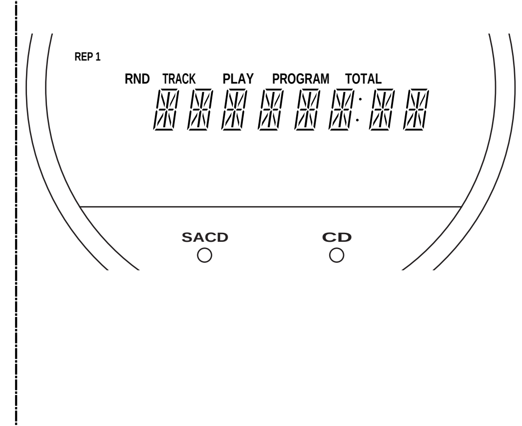

TDA1547 4STAGE FIR
D/A CONVERTOR
DIFFERENCIAL
L.P.F.(LPF)
BALANCE(LBA)
HDAM SHILED 032G
034G HDAM SHILED R.CH
+L
-L
FOR COAX
AMP L
(PA16 2/2)
+R
-R
FOR COAX
AMP R
(PA16 2/2)
+LBAL
(PA16 2/2)
-LBAL
(PA16 2/2)
+RBAL
(PA16 2/2)
-RBAL
(PA16 2/2)
ROOM POWER PWB
WG392K261-X (PA16 1/2)

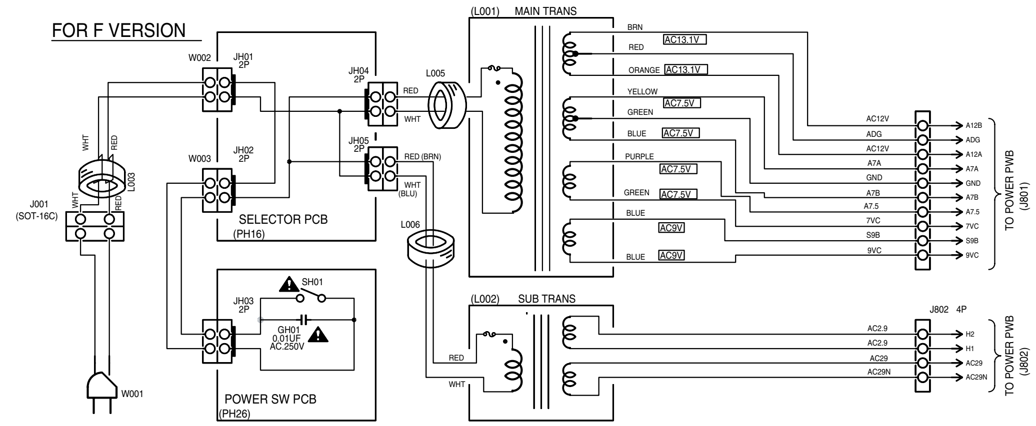


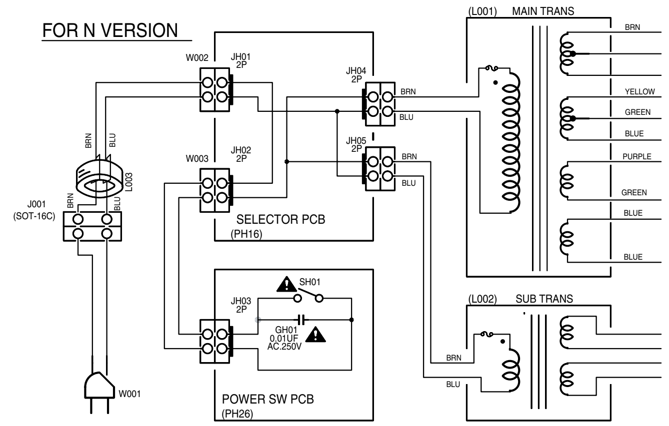


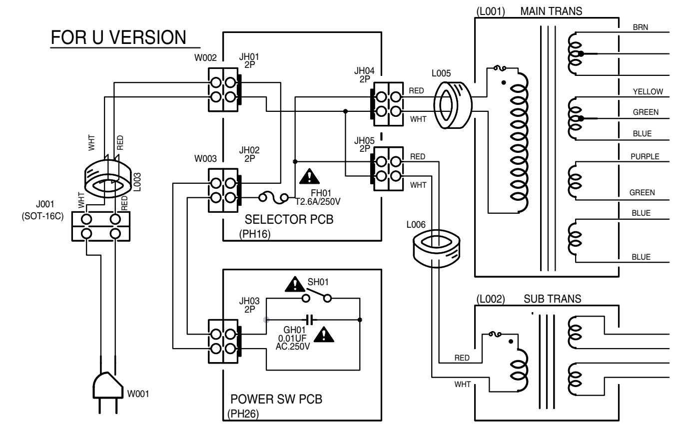
FRONT PCB ASS'Y

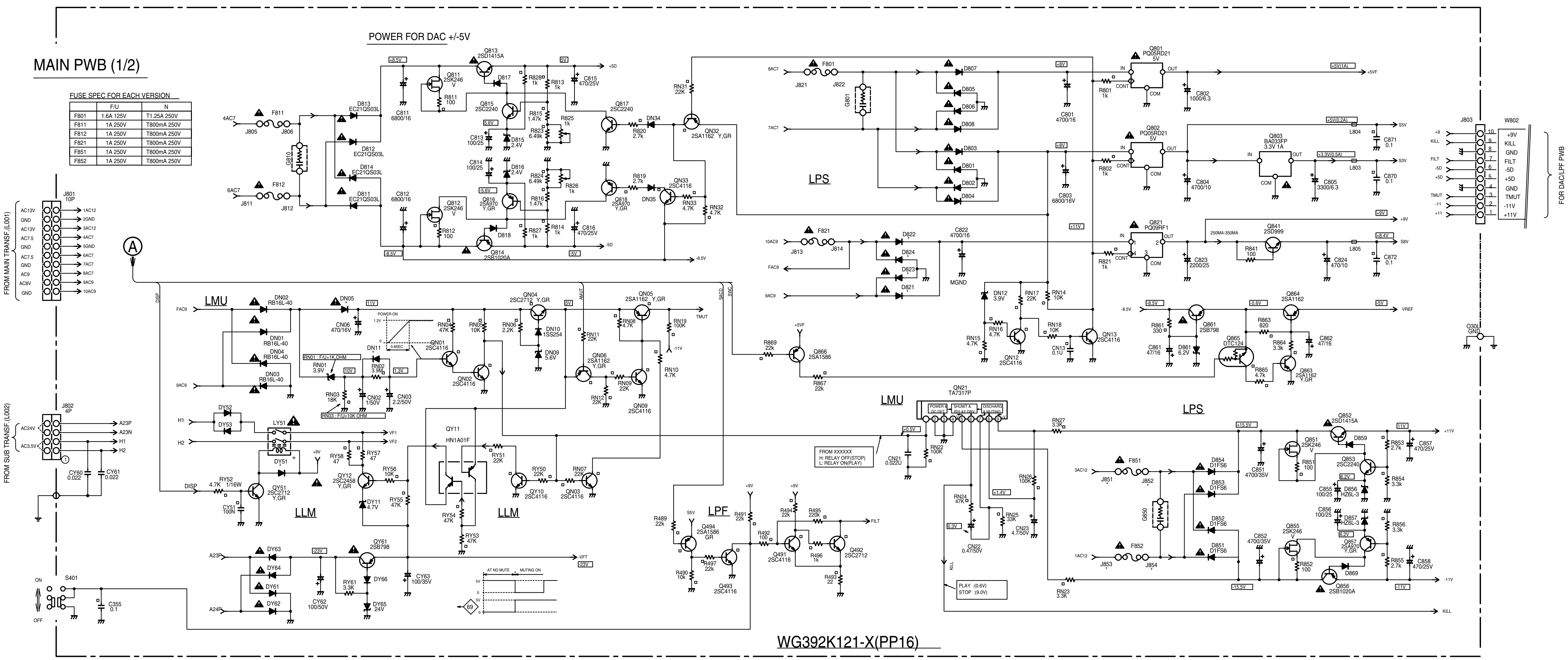
	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	EDIT	-	a	a	a	a	a	a	a	a
P2	SLEEP	-	b	b	b	b	b	b	b	b
P3	RND	-	c	c	c	c	c	c	c	c
P4	REP	-	d	d	d	d	d	d	d	d
P5	1	-	e	e	e	e	e	e	e	e
P6	MHz	-	f	f	f	f	f	f	f	f
P7	KHz	-	g	g	g	g	g	g	g	g
P8	a	a	h	h	h	h	h	h	h	h
P9	b	b	j	j	j	j	j	j	j	j
P10	c	c	k	k	k	k	k	k	k	k
P11	d	d	m	m	m	m	m	m	m	m
P12	e	e	n	n	n	n	n	n	n	n
P13	f	f	p	p	p	p	p	p	p	p
P14	g	g	r	r	r	r	r	r	r	r
P15	PRESET	-	-	-	PLAY	PROGRAM	-	Dp	TOTAL	MEMO
P16	TRACK	COL	-	-	TIMER	TUNED	-	col	STEREO	AUTO











FUSE SPEC FOR EACH VERSION

	F/U	N
F801	1.6A 125V	T1.25A 250V
F811	1A 250V	T800mA 250V
F812	1A 250V	T800mA 250V
F821	1A 250V	T800mA 250V
F851	1A 250V	T800mA 250V
F852	1A 250V	T800mA 250V

1.6 PARTS LOCATION

PA16

QN52 QN51

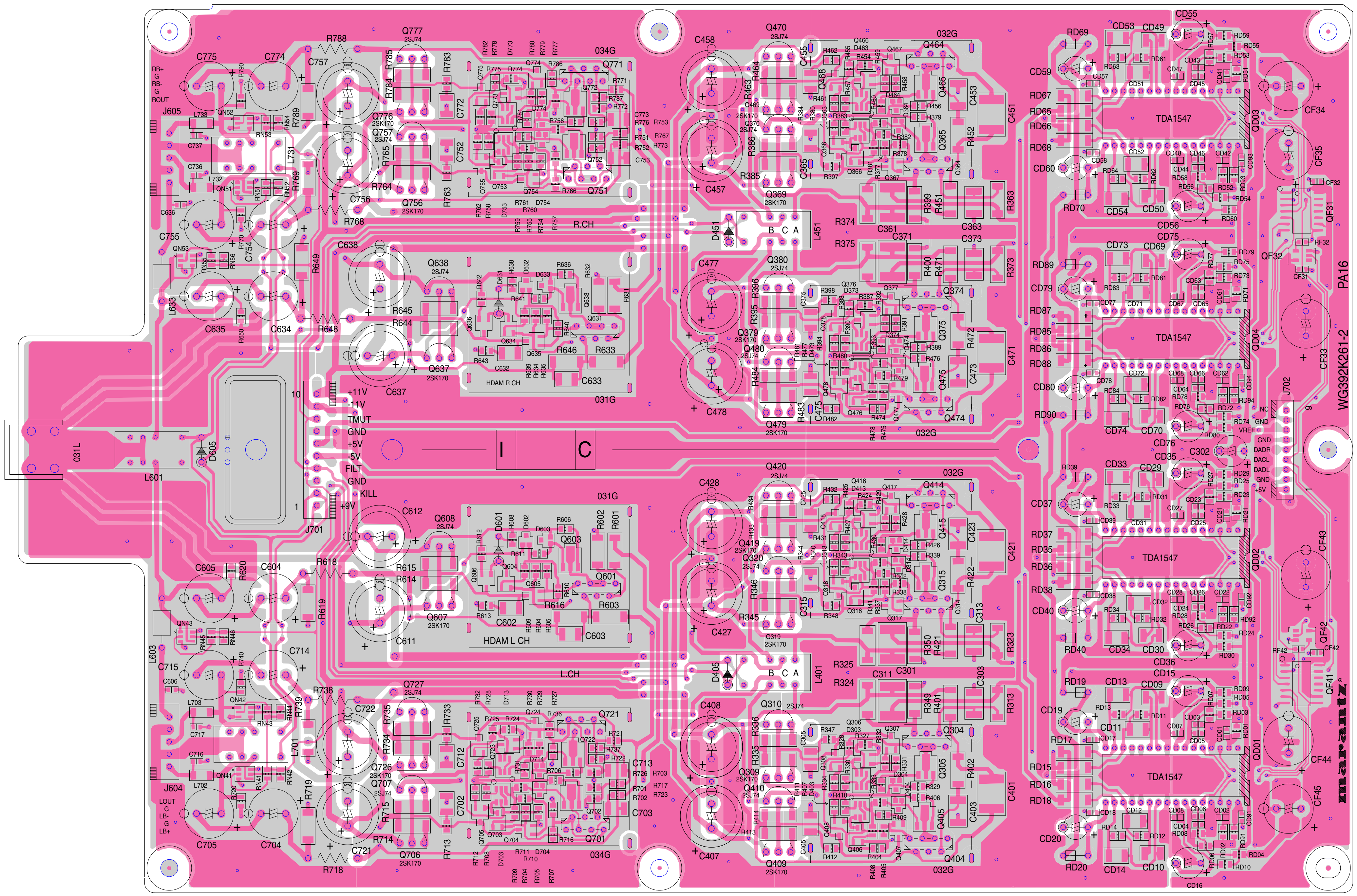
Q777 Q776 Q757 Q756 Q638 Q637

Q775 - Q771
Q755 - Q751
Q636 - Q633 Q631

Q470 Q469 Q468 - Q464
Q370 Q369 Q368 - Q364
Q380 Q379 Q378 - Q374
Q480 Q479 Q478 - Q474

QD03 QD04

QF31 QF32



Q608 Q607

Q606 - Q603 Q601

Q420 Q419 Q418 - Q414
Q320 Q319 Q318 - Q314
Q310 Q309 Q308 - Q304
Q410 Q409 Q408 - Q404

QD02 QD01

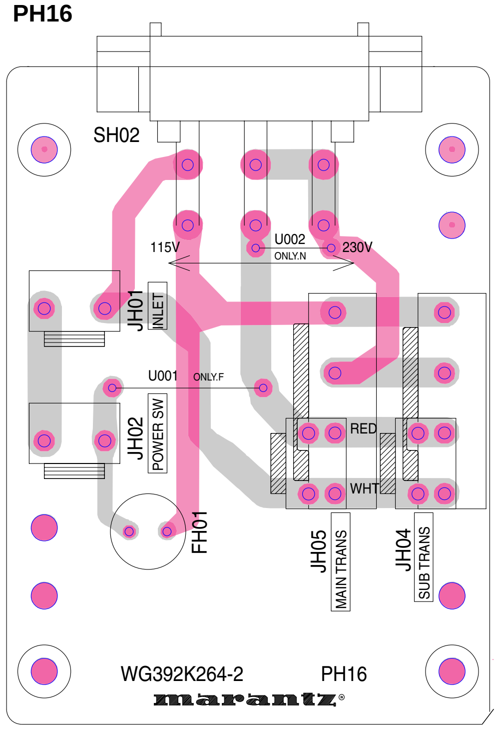
QF42 QF41

QN42 QN41

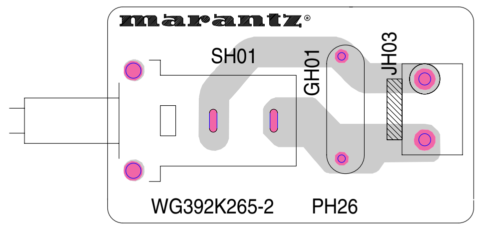
Q727 Q726 Q707 Q706

Q725 - Q721
Q705 - Q701

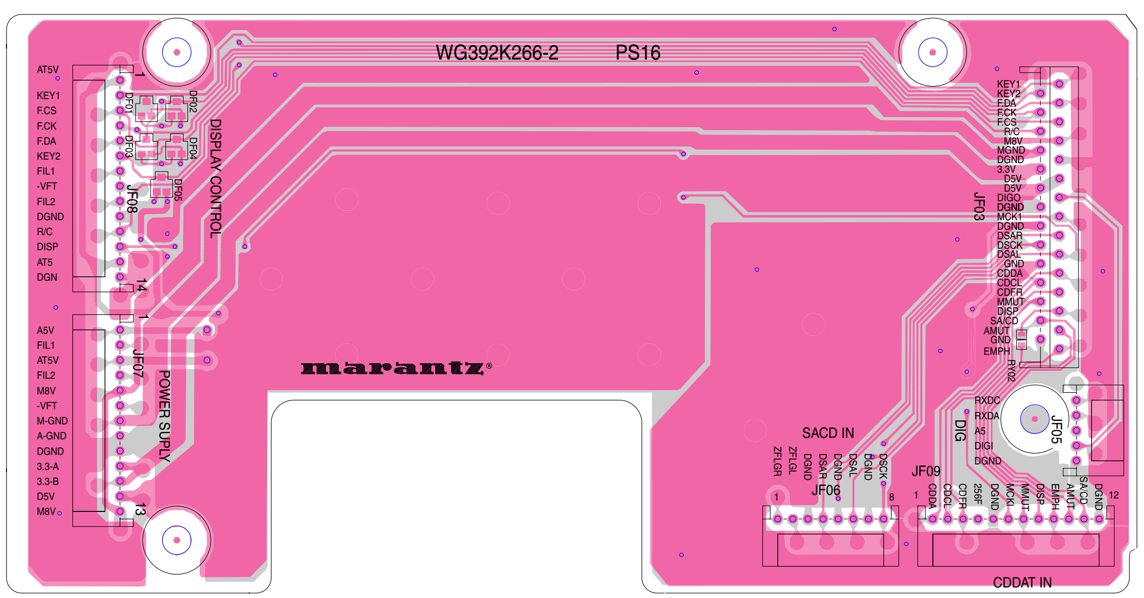
PH16



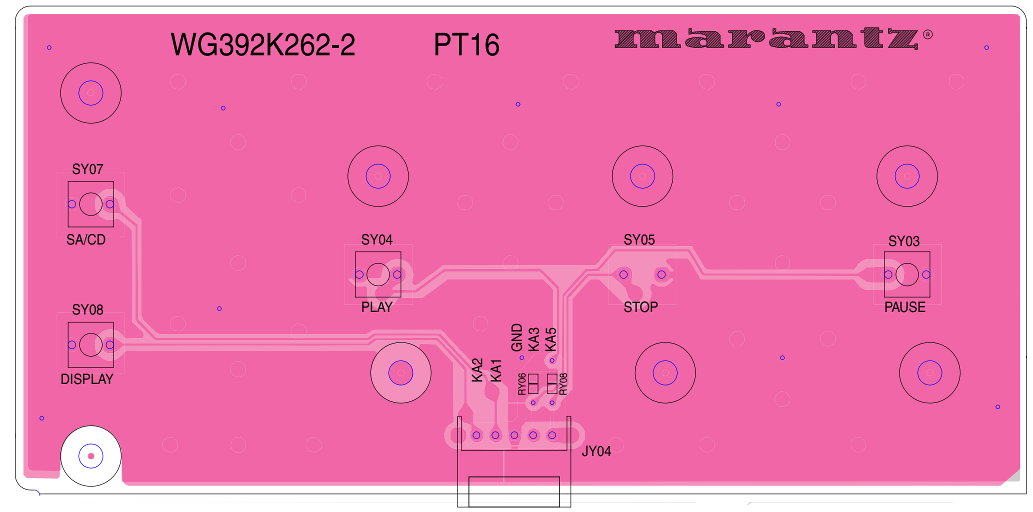
PH26



PS16

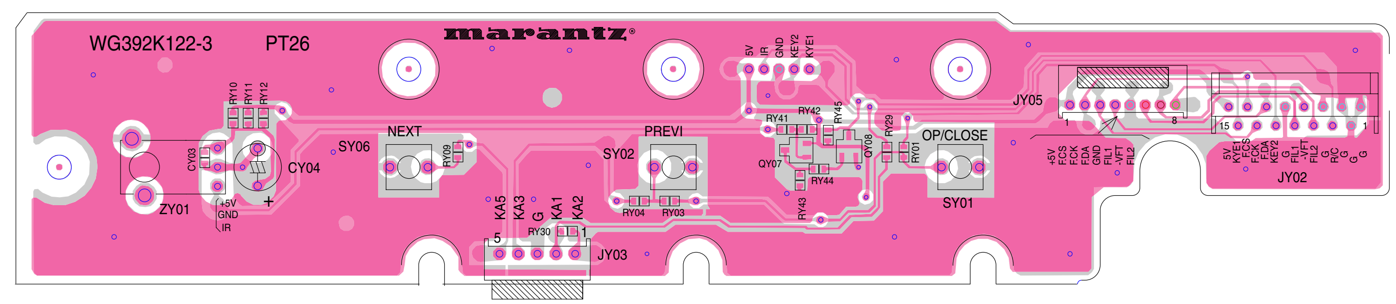


PT16



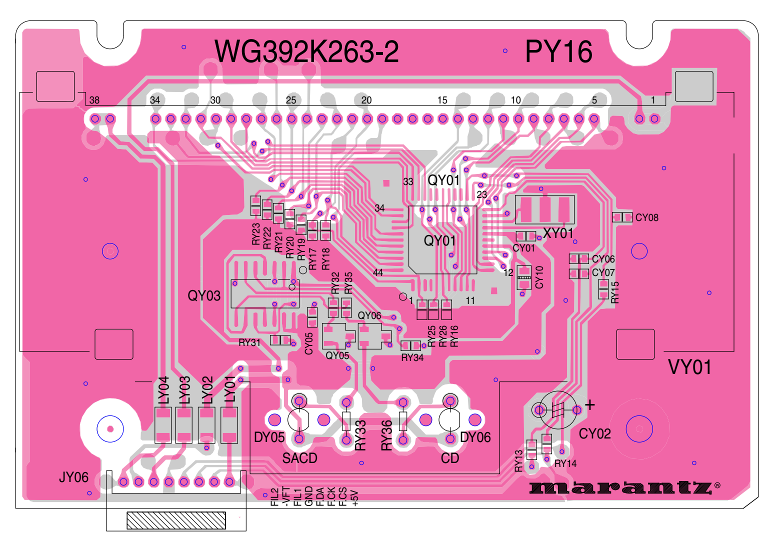
PY26

QY07 QY08



PY16

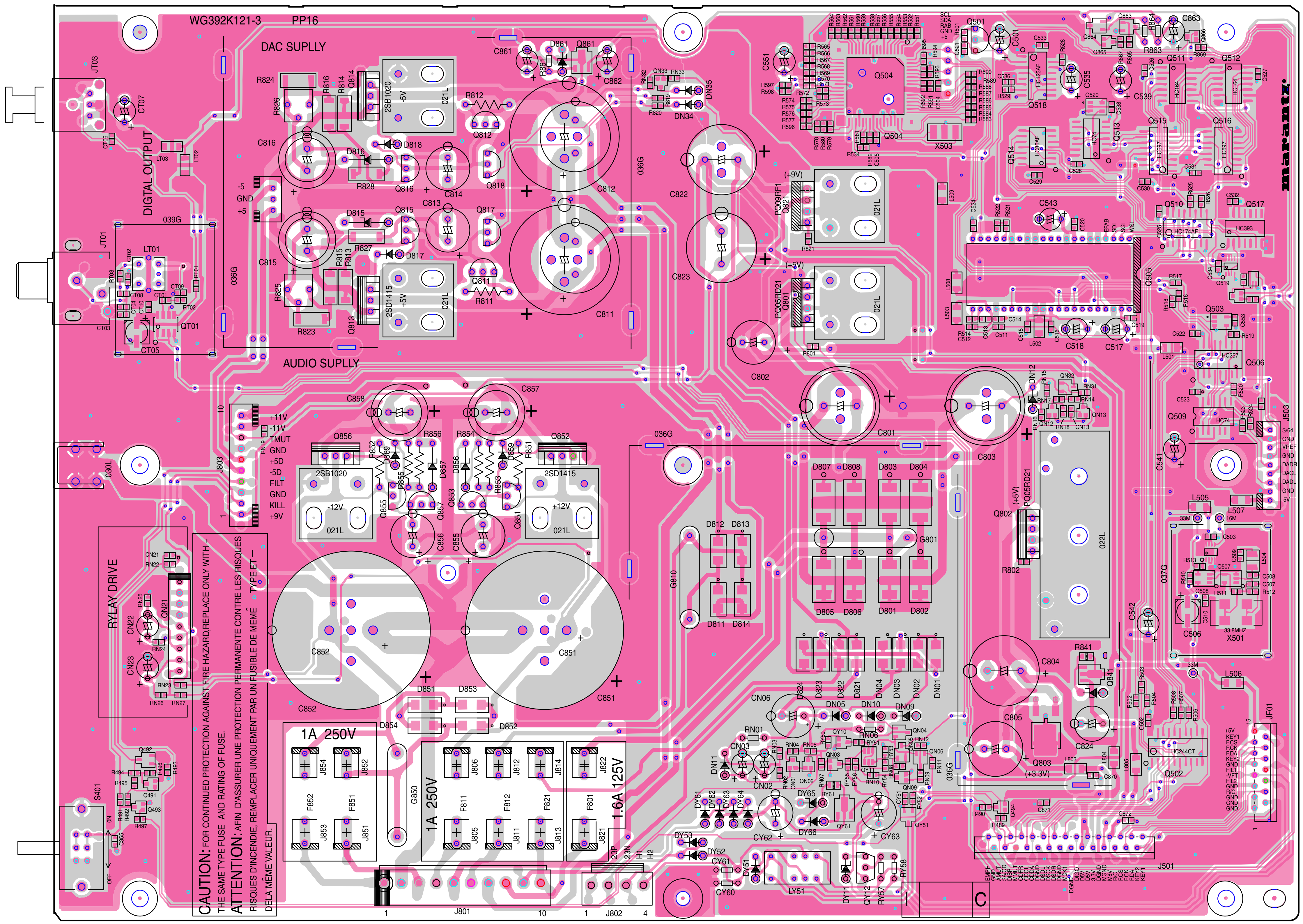
QY03 QY05 QY06 QY01



PP16

Q814 Q816 Q815 Q813 Q812 Q818 Q817 Q811 Q861 QN33 Q821 Q801 Q504 Q501 Q518Q520 Q863 - Q865 Q511 Q866 Q512 Q514 Q513 Q515 Q516 Q505 Q525 Q519 Q517 QN12 QN32 QN13 Q503 Q506 Q509

QT01



Q856 Q855 Q857 Q853 Q851 Q852

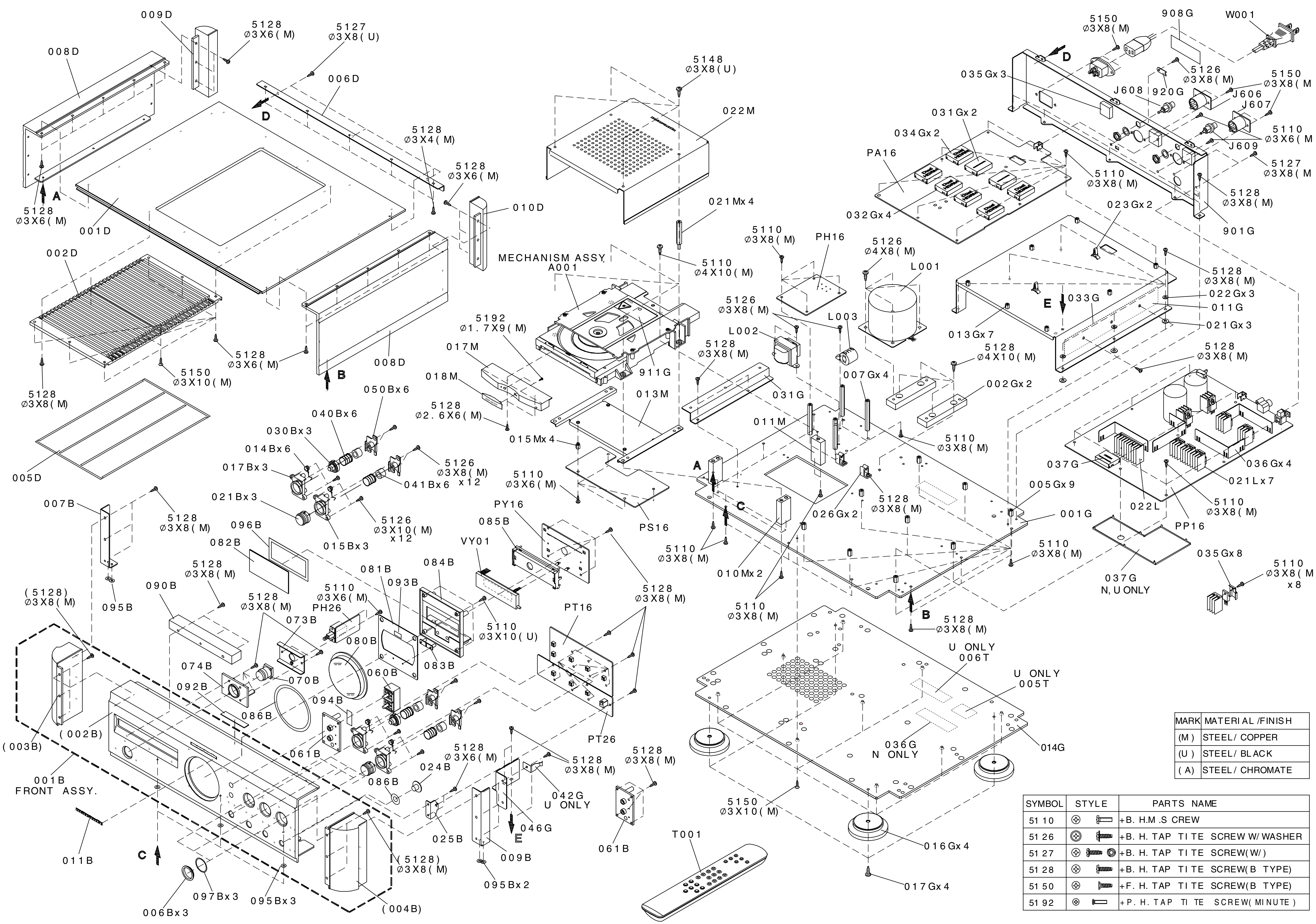
QN21 Q491 - Q493

QN01- QN03 QN04 - QN06 QY61 QY10 QY11 QY51

Q802 Q803 Q841 Q494

Q508 Q507 Q502

1.7 EXPLODED VIEW AND PARTS LIST



MARK	MATERIAL/FINISH
(M)	STEEL/COPPER
(U)	STEEL/BLACK
(A)	STEEL/CHROMATE

SYMBOL	STYLE	PARTS NAME
5110		+B.H.M.S CREW
5126		+B.H.TAP TITE SCREW W/WASHER
5127		+B.H.TAP TITE SCREW(W/)
5128		+B.H.TAP TITE SCREW(B TYPE)
5150		+F.H.TAP TITE SCREW(B TYPE)
5192		+P.H.TAP TITE SCREW(MINUTE)

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
001B			FRONT PANEL ASSY	392K248510
002B		9965 000 06839	FRONT PANEL	392K248110
003B		9965 000 06840	ESCUTCHEON (L) FRONT	392K063110
004B		9965 000 06841	ESCUTCHEON (R) FRONT	392K063120
006B		9965 000 06842	RING PLAY.STOP.PAUSE	392K353110
011B		9965 000 01554	MARANTZ BADGE GOLD	313J251110
015B			BUSH FOR PLAY/STOP/PAUSE	355K104020
017B			BUSH BUTTON O/C.NEXT.PREV	270K104010
021B		9965 000 06843	BUTTON	392K270120
022B			RETAINER	270K104020
023B			SHAFT	270K112010
024B		9965 000 06844	LENS IR	392K355010
030B		9965 000 06845	BUTTON ASSY O/C.NEXT.PREV	392K270530
050B			BRACKET ASSY F0R 059B	270K160500
060B		9965 000 06846	BUTTON DISPLAY	392K270140
061B			BUSH DISPLAY BUTTON	392K259020
070B		9965 000 06847	BUTTON ASSY POWER	392K270110
074B		9965 000 06848	BUSH POWER BUTTON	392K259010
080B		9965 000 06849	WINDOW.GLASS.NATURAL	392K158010
081B		9965 000 06850	INDICATOR WINDOW	392K265010
082B		9965 000 06851	MASK WINDOW	392K303010
083B		9965 000 06852	LENS WINDOW	392K355020
084B			HOLDER WINDOW	392K271010
086B			ADHESIVE FOR WINDOW. IR LENS	392K122010
089B			PROTECTOR TRAY ESCUTCHEON	392K269010
093B		9965 000 06853	BADGE FOR SACD INDICATOR	392K251010
096B			ADHESIVE FOR MASK	392K122020
097B			ADHESIVE FOR RING	392K122030
001D	F1N		TOP COVER	392K257110
001D	N1G	9965 000 06854	TOP COVER FOR EMC	392K257120
001D	U1G	9965 000 06854	TOP COVER FOR UL	392K257120
002D		9965 000 06855	ESCUTCHEON TOP COVER	231J063120
008D	F1N		SIDE PANEL LEFR/RIGHT	392K249110
008D	N1G U1G	9965 000 06856	SIDE PANEL LEFT/RIGHT FOR EMC UL	392K249120
009D		9965 000 06857	ESCUTCHEON LEFT REAR	392K063130
010D		9965 000 06858	ESCUTCHEON RIGHT REAR	392K063140
014G			BOTTOM LID	392K257020
016G		9965 000 06859	LEG	392K057010
017G		9965 000 06860	SCREW FOR LEG	392K010010
017M		9965 000 06861	ESCUTCHEON CD TRAY	392K063150
018M		9965 000 06862	ESCUTCHEON CD LOGO	392K063160
A001			MECHANISM ASSY CDM-10M	392K304500
⚠ J001	F1N		3P MAINS INLET CTC2103-0203 SMK	YJ04002160
⚠ J001	N1G U1G	4822 265 11399	2P MAINS INLET SOT-16C	YJ04002360
J606		4822 265 20415	PLUG XLR CANON FOR L	YP10002780
J607		4822 265 20415	PLUG XLM CANON FOR R	YP10002780
J608		4822 290 81602	RCA JACK 1P GLD	YT02010740
J609		4822 290 81602	RCA JACK 1P GLD	YT02010740
⚠ L001	F1N		MAINS TRANSF. MAIN 100V	TS46011010
⚠ L001	N1G	9965 000 06822	MAINS TRANSF. MAIN 230V	TS46011030
⚠ L001	U1G		MAINS TRANSF. MAIN 120V	TS46011020
⚠ L002	F1N		MAINS TRANSF. SUB 100V	TS13521010
⚠ L002	N1G	4822 146 11141	MAINS TRANSF. SUB 230V	TS13521020
⚠ L002	U1G		MAINS TRANSF. SUB 120V	TS13521060
WF01		9965 000 06831	FFC 15PIN 120MM 1.25MM PITCH	YU15120500

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
W502		9965 000 06832	FFC 19PIN 120MM 1.25MM PITCH	YU29120530
			PACKING	
001T	F1N		USER GUIDE	392K851110
001T	N1G	9965 000 06863	USER GUIDE	392K851310
001T	U1G		USER GUIDE	392K851250
T001		9965 000 06838	REMORT CONTROLLER RC-1SA	ZK392K0010
⚠ W001	F1N		MAINS CORD FOR F OFC 2P	ZC01803130
⚠ W001	N1G	4822 321 11033	MAINS CORD 10A 250V CLASS2	ZC01803080
⚠ W001	U1G		MAINS CORD UL/CSA 10A 125V	ZC01803100
			NOT STANDARD SPARE PARTS	
001S			PACKING CASE MZ PURE HI-FI GL	392K801010
002S			CUSHION LEFT	392K809010
003S			CUSHION RIGHT	392K809020

1.8 ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTORS

R∗∗∗: 1) GD05 × × × 140, Carbon film fixed resistor, ±5% 1/4W
R∗∗∗: 2) GD05 × × × 160, Carbon film fixed resistor, ±5% 1/6W
① —— Resistance value

Examples ;
① Resistance value

0.1 Ω 001	10 Ω 100	1 kΩ 102	100 kΩ 104
0.5 Ω 005	18 Ω 180	2.7 kΩ 272	680 kΩ 684
1 Ω 010	100 Ω 101	10 kΩ 103	1 MΩ 105
6.8 Ω 068	390 Ω 391	22 kΩ 223	4.7 MΩ 475

Note : Please distinguish 1/4W from 1/6W by the shape of parts used actually.

CAPACITORS

C∗∗∗: CERAMIC CAP.
3) DD1 × × × × 370, Ceramic capacitor
Disc type
Temp.coeff.P350 ～N1000, 50V
② ③
③ —— Capacity value
② —— Tolerance

Examples ;
② Tolerance (Capacity deviation)
±0.25 pF 0
±0.5 pF 1
±5% 5

∗ Tolerance of COMMON PARTS handled here are as follows :
0.5 pF ～ 5 pF .... ±0.25 pF
6 pF ～ 10 pF .... ±0.5 pF
12 pF ～ 560 pF .... ±5%

③ Capacity value

0.5 pF 005	3 pF 030	100 pF 101
1 pF 010	10 pF 100	220 pF 221
1.5 pF 015	47 pF 470	560 pF 561

C∗∗∗ : CERAMIC CAP.
4) DK16 × × × 300, High dielectric constant ceramic capacitor
Disc type
Temp.chara. 2B4, 50V
④ —— Capacity value

Examples ;
④ Capacity value

100 pF 101	1000 pF 102	10000 pF 103
470 pF 471	2200 pF 222	

C∗∗∗ : 5) ELECTROLY CAP. ( ), 6) FILM CAP. ( )
5) EA × × × × × × 10, Electrolytic capacitor
One-way lead type, Tolerance ±20%
⑤ ⑥
⑥ —— Working voltage
⑤ —— Capacity value

Examples ;
⑤ Capacity value

0.1 µF 104	4.7 µF 475	100 µF 107
0.33 µF 334	10 µF 106	330 µF 337
1 µF 105	22 µF 226	1100 µF 118
		2200 µF 228

⑥ Working voltage

6.3V 006	25V 025
10V 010	35V 035
16V 016	50V 050

6) DF15 × × × 350 → Plastic film capacitor
DF15 × × × 310 → One-way type, Mylar ±5% 50V
DF16 × × × 310 → Plastic film capacitor
One-way type, Mylar ±10% 50V
⑦ —— Capacity value

Examples ;
⑦ Capacity value

0.001 µF (1000 pF) 102	0.1 µF 104
0.0018 µF 182	0.56 µF 564
0.01 µF 103	1 µF 105
0.015 µF 153	

NOTE : 1) The above CODES (R∗∗∗ , R∗∗∗ , C∗∗∗ , C∗∗∗ and C ∗∗∗) are omitted on the schematic diagram in some case.
2) On the occasion, be confirmed the common parts on the parts list.
3) Refer to "Common Parts List" for the other common parts (**RI05**, **DD4**, **DK4**).

NOTE ON SAFETY FOR FUSIBLE RESISTOR :

The suppliers and their type numbers of fusible resistors are as follows;

1. KOA Corporation

Part No. (MJI)		Type No. (KOA)	Description
NH05 × × × 140	→	RF25S × × × × ΩJ	(±5% 1/4W)
NH05 × × × 120	→	RF50S × × × × ΩJ	(±5% 1/2W)
NH85 × × × 110	→	RF73B2A × × × × ΩJ	(±5% 1/10W)
NH95 × × × 140	→	RF73B2E × × × × ΩJ	(±5% 1/4W)

∗ Resistance value — Resistance value (0.1 Ω – 10 kΩ)

2. Matsushita Electronic Components Co., Ltd

Part No. (MJI)		Type No. (MEC)	Description
NF05 × × × 140 / RF05 × × × 140	→	ERD-2FCJ × × ×	(±5% 1/4W)
NF02 × × × 140 / RF02 × × × 140	→	ERD-2FCG × × ×	(±2% 1/4W)

∗ Resistance value — ∗ Resistance value

Examples ;
∗ Resistance value

0.1 Ω 001	10 Ω 100	1 kΩ 102	100 kΩ 104
0.5 Ω 005	18 Ω 180	2.7 kΩ 272	680 kΩ 684
1 Ω 010	100 Ω 101	10 kΩ 103	1 MΩ 105
6.8 Ω 068	390 Ω 391	22 kΩ 223	4.7 MΩ 475

ABBREVIATION AND MARKS

ANT.	: ANTENNA	BATT.	: BATTERY
CAP.	: CAPACITOR	CER.	: CERAMIC
CONN.	: CONNECTING	DIG.	: DIGITAL
HP	: HEADPHONE	MIC.	: MICROPHONE
µ-PRO	: MICROPROCESSOR	REC.	: RECORDING
RES.	: RESISTOR	SPK	: SPEAKER
SW	: SWITCH	TRANSF.	: TRANSFORMER
TRIM.	: TRIMMING	TRS.	: TRAMSISTOR
VAR.	: VARIABLE	X'TAL	: CRYSTAL

NOTE ON SAFETY :

Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replaced any part marked with symbol ⚠ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.

安全上の注意：

⚠がついている部品は、安全上重要な部品です。必ず指定されている部品番号の部品を使用して下さい。

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
			PA16-DAC HDAM	
			CIRCUIT BOARD	
			PA16-CAPACITORS	
C301		4822 126 14578	CHIP MICA 1200pF 100WV	DF95122510
C302		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
C303		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510
C305		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C311		4822 126 14578	CHIP MICA 1200pF 100WV	DF95122510
C313		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510
C315		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C361		4822 126 14578	CHIP MICA 1200pF 100WV	DF95122510
C363		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510
C365		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C371		4822 126 14578	CHIP MICA 1200pF 100WV	DF95122510
C373		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510
C375		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C401		4822 126 14578	CHIP MICA 1200pF ±5%	DF95122510
C403		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510
C405		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C407	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C407	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C408	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C408	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C421		4822 126 14578	CHIP MICA 1200pF ±5%	DF95122510
C423		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510
C425		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C427	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C427	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C428	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C428	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C451		4822 126 14578	CHIP MICA 1200pF ±5%	DF95122510
C453		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510
C455		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C457	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C457	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C458	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C458	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C471		4822 126 14578	CHIP MICA 1200pF ±5%	DF95122510
C473		4822 123 30363	CHIP MICA 820pF ±5% 100WV	DF95821510
C475		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C477	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C477	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C477	U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C478	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C478	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C478	U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C602		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500
C603		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500
C604		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C605		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C606		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300
C611	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C611	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C612	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C612	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C632		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500
C633		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500
C634		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C635		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C636		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300
C637	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C637	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C638	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C638	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C702		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C703		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500
C704		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
C705		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C712		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C713		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500
C714		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C715		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C716		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300
C717		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300
C721	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C721	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C722	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C722	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C736		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300
C737		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300
C752		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C753		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500
C754		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C755		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C756	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C756	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C757	F1, /U1	4822 124 22242	ELECT. 470µF 25V (ARA)	OA47702550
C757	N1	4822 124 80958	ELECT. 470µF 16V (ARS)	OA47701640
C772		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
C773		9965 000 06821	CHIP MICA 33pF ±5% 500WV	DF95330500
C774		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
C775		4822 124 80123	ELECT. 220µF 16V ARS	OA22701640
CD01				
~		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD08				
CD09		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
CD10		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
CD11				
~		4822 123 30359	CHIP MICA 220pF ±5% 100WV	DF95221510
CD14				
CD15		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
CD16		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
CD17		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD18		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD19		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
CD20		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
CD21				
~		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD28				
CD29		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
CD30		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
CD31				
~		4822 123 30359	CHIP MICA 220pF ±5% 100WV	DF95221510
CD34				
CD35		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
CD36		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
CD37		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
CD38		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD39		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD40		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
CD41				
		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD48				
CD49				
~		4822 123 30359	CHIP MICA 220pF ±5% 100WV	DF95221510
CD54				
CD55		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
CD56		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
CD57		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD58		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD59		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
CD60		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
CD61				
~		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD68				
CD69		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
CD70		4822 123 30361	CHIP MICA 56pF ±5% 500WV	DF95560500
CD71				
~		4822 123 30359	CHIP MICA 220pF ±5% 100WV	DF95221510
CD74				
CD75		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
CD76		4822 124 41537	ELECT. 220µF M 6.3V RA-2	OA22700620
CD77		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD78		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD79		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
CD80		4822 124 90353	ELECT. 100µF M 10V RA-2	OA10701020
CD91				
~		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
CD94				
CF31		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200
CF32		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200
CF33	F1, /U1	4822 124 22238	ELECT. 100µF 25V ARA	OA10702550
CF33	N1	4822 124 80119	ELECT. 100µF 25V (ARS)	OA10702540
CF34	F1, /U1	4822 124 22238	ELECT. 100µF 25V ARA	OA10702550
CF34	N1	4822 124 80119	ELECT. 100µF 25V (ARS)	OA10702540
CF35	F1, /U1	4822 124 22238	ELECT. 100µF 25V ARA	OA10702550
CF35	N1	4822 124 80119	ELECT. 100µF 25V (ARS)	OA10702540
CF42		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200
CF43	F1, /U1	4822 124 22238	ELECT. 100µF 25V ARA	OA10702550
CF43	N1	4822 124 80119	ELECT. 100µF 25V (ARS)	OA10702540
CF44	F1, /U1	4822 124 22238	ELECT. 100µF 25V ARA	OA10702550
CF44	N1	4822 124 80119	ELECT. 100µF 25V (ARS)	OA10702540
CF45	F1, /U1	4822 124 22238	ELECT. 100µF 25V ARA	OA10702550
CF45	N1	4822 124 80119	ELECT. 100µF 25V (ARS)	OA10702540
			PA16-RESISTORS	
R313			3.01kΩ ±1% 1/4W	GM11430110
R323			0.01kΩ ±1% 1/4W	GM11430110
R324			1.47kΩ ±1% 1/4W	GM11414710
R325			1.47kΩ ±1% 1/4W	GM11414710
R327		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R328		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R329		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R330		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R331		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R332		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R333		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R334		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R335			10.0Ω ±1% 1/4W	GM114100G0
R336			10.0Ω ±1% 1/4W	GM114100G0
R337		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R338		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R339		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R340		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R341		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R342		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R343		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R344		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R345			10.0Ω ±1% 1/4W	GM114100G0
R346			10.0Ω ±1% 1/4W	GM114100G0
R347		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R348		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R349			4.87kΩ ±1% 1/4W	GM11448710
R350			4.87kΩ ±1% 1/4W	GM11448710
R363			3.01kΩ ±1% 1/4W	GM11430110
R373			3.01kΩ ±1% 1/4W	GM11430110
R374			1.47kΩ ±1% 1/4W	GM11414710
R375			1.47kΩ ±1% 1/4W	GM11414710
R377		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R378		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R379		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R380		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R381		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R382		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R383		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
R384		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R385			10.0Ω ±1% 1/4W	GM114100G0
R386			10.0Ω ±1% 1/4W	GM114100G0
R387		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R388		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R389		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R390		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R391		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R392		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R393		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R394		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R395			10.0Ω ±1% 1/4W	GM114100G0
R396			10.0Ω ±1% 1/4W	GM114100G0
R397		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R398		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R399			4.87kΩ ±1% 1/4W	GM11448710
R400			4.87kΩ ±1% 1/4W	GM11448710
R401			2.74kΩ ±1% 1/4W	GM11427410
R402			2.74kΩ ±1% 1/4W	GM11427410
R404		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R405		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R406		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R407		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R408		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R409		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R410		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R411		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R412		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R413			10.0Ω ±1% 1/4W	GM114100G0
R414			10.0Ω ±1% 1/4W	GM114100G0
R421			2.74kΩ ±1% 1/4W	GM11427410
R422			2.74kΩ ±1% 1/4W	GM11427410
R424		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R425		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R426		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R427		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R428		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R429		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R430		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R431		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R432		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R433			10.0Ω ±1% 1/4W	GM114100G0
R434			10.0Ω ±1% 1/4W	GM114100G0
R451			2.74kΩ ±1% 1/4W	GM11427410
R452			2.74kΩ ±1% 1/4W	GM11427410
R454		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R455		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R456		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R457		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R458		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R459		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R460		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R461		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R462		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R463			10.0Ω ±1% 1/4W	GM114100G0
R464			10.0Ω ±1% 1/4W	GM114100G0
R471			2.74kΩ ±1% 1/4W	GM11427410
R472			2.74kΩ ±1% 1/4W	GM11427410
R474		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R475		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R476		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R477		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R478		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R479		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R480		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R481		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R482		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R483			10.0Ω ±1% 1/4W	GM114100G0
R484			10.0Ω ±1% 1/4W	GM114100G0

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
R601			3.32kΩ ±1% 1/4W	GM11433210
R602			3.32kΩ ±1% 1/4W	GM11433210
R603			3.32kΩ ±1% 1/4W	GM11433210
R604		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R605		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R606		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R608		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R609		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R610		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R611		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R612		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R613		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R614			10.0Ω ±1% 1/4W	GM114100G0
R615			10.0Ω ±1% 1/4W	GM114100G0
R616			3.32kΩ ±1% 1/4W	GM11433210
R618		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R619			10kΩ ±1% 1/4W	GM11410020
R620		4822 111 90896	CHIP 100kΩ ±5% 1/10W	NI05104110
R631			3.32kΩ ±1% 1/4W	GM11433210
R632			3.32kΩ ±1% 1/4W	GM11433210
R633			3.32kΩ ±1% 1/4W	GM11433210
R634		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R635		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R636		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R638		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R639		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R640		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R641		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R642		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R643		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R644			10.0Ω ±1% 1/4W	GM114100G0
R645			10.0Ω ±1% 1/4W	GM114100G0
R646			3.32kΩ ±1% 1/4W	GM11433210
R648		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R649			10kΩ ±1% 1/4W	GM11410020
R650		4822 111 90896	CHIP 100kΩ ±5% 1/10W	NI05104110
R701		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R702		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R703		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R704		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R705		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R706		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R708		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R709		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R710		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R711		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R712		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R713		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R714			10.0Ω ±1% 1/4W	GM114100G0
R715			10.0Ω ±1% 1/4W	GM114100G0
R716		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R718		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R719			10kΩ ±1% 1/4W	GM11410020
R720		4822 111 90896	CHIP 100kΩ ±5% 1/10W	NI05104110
R721		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R722		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R723		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R724		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R725		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R726		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R728		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R729		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R730		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R731		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R732		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R733		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R734			10.0Ω ±1% 1/4W	GM114100G0
R735			10.0Ω ±1% 1/4W	GM114100G0
R736		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R738		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R739			10kΩ ±1% 1/4W	GM11410020
R740		4822 111 90896	CHIP 100kΩ ±5% 1/10W	NI05104110
R751		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R752		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R753		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R754		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R755		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R756		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R758		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R759		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R760		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R761		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R762		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R763		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R764			10.0Ω ±1% 1/4W	GM114100G0
R765			10.0Ω ±1% 1/4W	GM114100G0
R766		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R768		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R769			10kΩ ±1% 1/4W	GM11410020
R770		4822 111 90896	CHIP 100kΩ ±5% 1/10W	NI05104110
R771		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R772		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R773		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R774		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R775		4822 116 90503	CHIP 150Ω ±5% 1/10W	NI05151110
R776		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R778		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R779		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R780		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R781		4822 117 12367	CHIP 33kΩ ±1% 1/10W	NI01333110
R782		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
R783		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R784			10.0Ω ±1% 1/4W	GM114100G0
R785			10.0Ω ±1% 1/4W	GM114100G0
R786		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
R788		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R789			10kΩ ±1% 1/4W	GM11410020
R790		4822 111 90896	CHIP 100kΩ ±5% 1/10W	NI05104110
⚠ RD01		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
⚠ RD02		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
⚠ RD03		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
⚠ RD04		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
RD05		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
RD06		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
RD07		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
RD08		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
RD09		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
RD10		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
RD11		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
RD12		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
RD13		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
RD14		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
RD15				
~			10kΩ ±1% 1/4W	GM11410020
RD18				
⚠ RD19		4822 116 60309	FUSIBLE 2.2Ω ±5% 1/4W	NH05022140
⚠ RD20		4822 116 60309	FUSIBLE 2.2Ω ±5% 1/4W	NH05022140
⚠ RD21				
~		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
⚠ RD24				
RD25		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
RD26		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
RD27		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
RD28		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
RD29		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
RD30		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
RD31				
RD32		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
RD33		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
RD34				
RD35				
~			10kΩ ±1% 1/4W	GM11410020
RD38				
⚠ RD39		4822 116 60309	FUSIBLE 2.2Ω ±5% 1/4W	NH05022140
⚠ RD40		4822 116 60309	FUSIBLE 2.2Ω ±5% 1/4W	NH05022140
⚠ RD51				
~		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
⚠ RD54				
RD55		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
RD56		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
RD57		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
RD58		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
RD59		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
RD60		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
RD61				
~		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
RD64				
RD65				
~			10kΩ ±1% 1/4W	GM11410020
RD68				
⚠ RD69		4822 116 60309	FUSIBLE 2.2Ω ±5% 1/4W	NH05022140
⚠ RD70		4822 116 60309	FUSIBLE 2.2Ω ±5% 1/4W	NH05022140
⚠ RD71				
~		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
⚠ RD74				
RD75		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
RD76		4822 117 11139	CHIP 1.5kΩ ±5% 1/10W	NI05152110
RD77		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
RD78		4822 051 20332	CHIP 3.3kΩ ±1% 1/10W	NI01332110
RD79		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
RD80		4822 117 11953	CHIP 560Ω ±5% 1/10W	NI05561110
RD81				
~		4822 117 13581	CHIP 13 kΩ ±1% 1/10W	NI01133110
RD84				
RD85				
~			10kΩ ±1% 1/4W	GM11410020
RD88				
⚠ RD89		4822 116 60309	FUSIBLE 2.2Ω J 1/4W	NH05022140
⚠ RD90		4822 116 60309	FUSIBLE 2.2Ω J 1/4W	NH05022140
⚠ RD91				
~		4822 051 20338	FUSIBLE 3.3Ω ±5% 1/10W	NH85033110
⚠ RD94				
RF32		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610
RF42		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610
RN41				
~		4822 117 11449	CHIP 2.2kΩ ±5% 1/10W	NI05222110
RN46				
RN51				
~		4822 117 11449	CHIP 2.2kΩ ±5% 1/10W	NI05222110
RN56				
			PA16-SEMICONDUCTORS	
D303		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D304		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D313		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D314		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D363		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D364		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D373		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D374		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D403		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D404		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D405		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D413		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D414		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D451		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
D463		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D464		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D473		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D474		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D601		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D602		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D603		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D605		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D631		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
D632		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D633		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D703		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D704		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D713		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D714		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D753		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D754		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
D773		4822 130 81148	CHIP DIODE IMN10	HZ20007210
D774		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
Q304		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q305		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q306		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q307		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q308		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q309		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q310		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q314		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q315		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q316		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q317		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q318		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q319		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q320		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q364		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q365		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q366		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q367		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q368		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q369		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q370		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q374		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q375		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q376		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q377		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q378		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q379		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q380		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q404		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q405		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q406		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q407		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q408		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q409		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q410		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q414		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q415		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q416		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q417		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q418		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q419		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q420		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q464		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q465		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
Q466		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q467		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q468		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q469		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q470		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q474		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q475		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q476		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q477		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q478		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q479		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q480		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q601		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q603		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q604		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q605		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q606		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q607		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q608		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q631		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q633		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q634		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q635		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q636		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q637		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q638		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q701		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q702		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q703		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q704		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q705		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q706		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q707		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q721		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q722		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q723		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q724		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q725		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q726		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q727		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q751		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q752		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q753		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q754		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q755		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q756		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q757		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
Q771		4822 130 42843	F.E.T. 2SK389 GR OR BL	HF203892A0
Q772		4822 130 61425	CHIP TRS. 2SC2873 Y	HX328731B0
Q773		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q774		4822 130 63928	CHIP TRS. 2SA1312 B	HX113121B0
Q775		4822 130 63929	CHIP TRS. 2SC3324 B	HX333241B0
Q776		5322 130 41844	F.E.T. 2SK170 V LANK	HF201701H0
Q777		4822 130 62649	F.E.T. 2SJ74 V LANK	HF100741H0
QD01 ~ QD04		4822 209 31355	IC TDA1547 DAC7	HC10066490
QF31		5322 209 17088	IC TC74HC164AF	HC716405Z0
QF32		4822 209 32984	IC TC7SHU04F 1PACKINV	HC10427050
QF41		5322 209 17088	IC TC74HC164AF	HC716405Z0
QF42		4822 209 32984	IC TC7SHU04F 1PACKINV	HC10427050
QN41 ~ QN43		4822 130 63844	DIG.TRS. HN1C03(B)(NPNX2(MUTING))	BA20016050
QN51 ~ QN53		4822 130 63844	DIG.TRS. HN1C03(B)(NPNX2(MUTING))	BA20016050

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
			PA16-MISCELLANEOUS	
⚠ F801	N1	4822 070 31252	FUSE T1.25A 250V BS LISTED	FS10125850
L401		4822 280 10353	RELAY DC9V NA-9-WK FOR MUTING	LY20090090
L451		4822 280 10353	RELAY DC9V NA-9-WK FOR MUTING	LY20090090
L601		4822 280 10353	RELAY DC9V NA-9-WK FOR MUTING	LY20090090
L603		4822 158 60605	FERRIT BEADS (B-01-RT)	FC90050060
L633		4822 158 60605	FERRIT BEADS (B-01-RT)	FC90050060
L701		4822 280 10353	RELAY DC9V NA-9-WK	LY20090090
L702		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
L703		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
L731		4822 280 10353	RELAY DC9V NA-9-WK	LY20090090
L732		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
L733		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
			PH16-VOLTAGE SELECTOR CIRCUIT BOARD	
⚠ FH01	U1		FUSE T2.5A/250V TR5 NO.19372(TP)	FS20250200
			PH26-POWER SWITCH CIRCUIT BOARD	
⚠ GH01		4822 121 43732	FILM CAP. 0.01µF M 250V AC	DF77103500
⚠ SH01		9965 000 01361	PUSH SWITCH SDDLB1 POWER TV-5	SP01012470
			PP16-POWER CIRCUIT BOARD	
			PP16-CAPACITORS	
C355		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200
C501		4822 124 40763	ELECT. 2.2µF 50V ±20% RA-2	OA22505020
C502 ~ C505		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C506		4822 124 11131	TANTL.CAP CHIP 47µF 6.3V	EY47600620
C507		4822 126 11663	CHIP CER. 12pF ±5% CG 50V	DD95120300
C508		4822 126 11663	CHIP CER. 12pF ±5% CG 50V	DD95120300
C509		5322 126 11578	CHIP CER. 1000pF ±10% B 50V	DK96102300
C510		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C511		4822 126 13689	CHIP CER. 18pF ()	DD95180300
C512		4822 126 11669	CHIP CER. 27pF ()	DD95270300
C513		4822 126 14417	CHIP CER. 0.01µF ±10% 50V	DK96103300
C514		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C515		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C516		4822 126 13837	CHIP CER. 0.1µF ±10% B 10V	DK96104200
C517		4822 124 41539	ELECT. 47µF 16V RA-2	OA47601620
C518		4822 124 41539	ELECT. 47µF M 16V RA-2	OA47601620
C519 ~ C534		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200
C535		4822 124 40763	ELECT. 2.2µF 50V ±20% RA-2	OA22505020
C536		9965 000 06825	CHIP CER. 1µF 6.3V	DK96105200
C538		4822 126 13837	CHIP CER. 0.1µF ±10%	DK96104200
C539		4822 124 41539	ELECT. 47µF 16V RA-2	OA47601620
C541		4822 124 41539	ELECT. 47µF 16V RA-2	OA47601620
C542		4822 124 41539	ELECT. 47µF 16V RA-2	OA47601620
C543		4822 124 41539	ELECT. 47µF 16V RA-2	OA47601620
C551		4822 124 41539	ELECT. 47µF 16V ±20% RA-2	OA47601620
C553		4822 126 11687	CHIP CER. GRM39F104Z 0.1µF	DK98104200
C801		4822 124 41458	ELECT. 4700µF 16V ±20% RA-2	OA47801620
C802		4822 124 40181	ELECT. 1000µF 6.3V RA-2	OA10800620
C803		4822 124 12328	ELECT. 6800µF 16V ±20% RA-2	OA68801620
C804		4822 124 41458	ELECT. 4700µF 16V ±20% RA-2	OA47801620
C805		4822 124 80773	ELECT. 3300µF 6.3V ±20%	OA33800620
C811		4822 124 12328	ELECT. 6800UF/16V RA-2	OA68801620
C812		4822 124 12328	ELECT. 6800UF/16V RA-2	OA68801620

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C813		4822 124 22238	ELECT. 100μF 25V ARA	OA10702550
C814		4822 124 22238	ELECT. 100μF 25V ARA	OA10702550
C815	F1, /U1	4822 124 22242	ELECT. 470μF M 25V ARA	OA47702550
C815	N1	4822 124 80958	ELECT. 470μF 16V (ARS)	OA47701640
C816	F1, /U1	4822 124 22242	ELECT. 470μF M 25V ARA	OA47702550
C816	N1	4822 124 80958	ELECT. 470μF 16V (ARS)	OA47701640
C822		4822 124 41458	ELECT. 4700μF 16V ±20% RA-2	OA47801620
C823		4822 124 21511	ELECT. 2200μF 25V ±20% RA-2	OA22802520
C824		4822 124 90371	ELECT. 470μF 10V ±20% RA-2	OA47701020
C851		4822 124 12405	ELECT. 4700μF ±20% 35V	OB47803520
C852		4822 124 12405	ELECT. 4700μF ±20% 35V	OB47803520
C855		4822 124 22238	ELECT. 100μF ±20% 25V (ARA)	OA10702550
C856		4822 124 22238	ELECT. 100μF ±20% 25V (ARA)	OA10702550
C857		4822 124 22242	ELECT. 470μF M 25V ARA	OA47702550
C858		4822 124 22242	ELECT. 470μF M 25V ARA	OA47702550
C861		4822 124 41539	ELECT. 47μF 16V RA-2	OA47601620
C862		4822 124 41539	ELECT. 47μF 16V RA-2	OA47601620
C863		4822 124 41539	ELECT. 47μF 16V RA-2	OA47601620
C870		4822 126 11687	CHIP CER. 0.1μF +80%-20%	DK98104200
C871		4822 126 11687	CHIP CER. 0.1μF +80%-20%	DK98104200
C872		4822 126 11687	CHIP CER. 0.1μF +80%-20%	DK98104200
CN02		4822 124 41543	ELECT. 1μF 50V RA-2	OA10505020
CN03		4822 124 40763	ELECT. 2.2μF 50V RA-2	OA22505020
CN06		4822 124 22277	ELECT. 470μF 16V M RA-2	OA47701620
CN13		4822 126 11687	CHIP CER. 0.1μF +80%-20%	DK98104200
CN21		5322 122 32654	CHIP CER. 0.022μF ±10%	DK96223200
CN22		4822 124 22273	ELECT. 0.47μF M 50V RA-2	OA47405020
CN23		4822 124 80067	ELECT. 4.7μF M 50V RA-2	OA47505020
CT01		4822 126 11687	CHIP CER. 0.1μF +80%-20%	DK98104200
CT02		4822 126 11685	CHIP CER. 4700pF ±10% B 50V	DK96472300
CT03		4822 126 12339	CHIP CER. 2200pF ()	DK96222300
CT04		4822 126 13837	CHIP CER. 0.1μF ±10% B 10V	DK96104200
CT05		4822 124 11131	TANTL.CAP CHIP 47μF 6.3V	EY47600620
CT06		4822 126 11687	CHIP CER. 0.1μF +80%-20%	DK98104200
CT07		4822 124 41539	ELECT. 47μF 16V RA-2	OA47601620
CT08		4822 122 31765	CHIP CER. 100pF ±5% CG 50V	DD95101300
CT09	N1, /U1	4822 122 33777	CHIP CER. 47pF ±5% CG 50V	DD95470300
CT10		4822 126 11687	CHIP CER. 0.1μF +80%-20%	DK98104200
CY51		4822 126 11687	CHIP CER. 0.1μF +80%-20%	DK98104200
CY60			CER. 0.022μF TP050F223Z	DA17223110
CY61			CER. 0.022μF TP050F223Z	DA17223110
CY62		4822 124 90355	ELECT. 100μF M 50V RA-2	OA10705020
CY63		4822 124 41536	ELECT. 100μF M 35V RA-2	OA10703520
			PP16-RESISTORS	
R489		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R490		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610
R491		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R492		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R493		4822 117 12139	CHIP 22Ω ±5% 1/16W	NN05220610
R494		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R495		4822 117 12891	CHIP 220kΩ ±5% 1/16W	NN05224610
R496		4822 051 30102	CHIP 1kΩ ±5% 1/16W	NN05102610
R497		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R501		4822 051 30474	CHIP 470kΩ ±5% 1/16W	NN05474610
R502		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610
R503		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610
R504		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610
R506		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610
R507		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610
R508		4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610
R510	F1	4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610
R510	N1	4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R510	U1	4822 117 12139	CHIP 22Ω ±5% 1/16W	NN05220610
R511		4822 117 12968	CHIP 820Ω ±5% 1/16W	NN05821610
R512		4822 051 30334	CHIP 330kΩ ±5% 1/16W	NN05334610
R513	F1	4822 051 30109	CHIP 10Ω ±5% 1/16W	NN05100610
R513	N1	4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R513	U1	4822 051 30479	CHIP 47Ω ±5% 1/16W	NN05470610

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R514		4822 117 13632	CHIP 100kΩ ±5% 1/16W	NN05104610
R516	F1	4822 116 82487	CHIP 0Ω ±5% 1/16W	NN05000610
R516	N1,/U1	4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R518	N1,/U1	4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R519	F1	4822 116 82487	CHIP 0Ω ±5% 1/16W	NN05000610
R519	N1,/U1	4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R521		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R522		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R523	F1	4822 116 82487	CHIP 0Ω ±5% 1/16W	NN05000610
R523	N1,/U1	4822 051 30101	CHIP 0Ω ±5% 1/16W	NN05101610
R524	F1	4822 116 82487	CHIP 0Ω ±5% 1/16W	NN05000610
R524	N1,/U1	4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R525		4822 051 30479	CHIP 47Ω ±5% 1/16W	NN05470610
R526		4822 051 30479	CHIP 47Ω ±5% 1/16W	NN05470610
R528		4822 051 30105	CHIP 1MΩ ±5% 1/16W	NN05105610
R529		4822 051 30105	CHIP 1MΩ ±5% 1/16W	NN05105610
R534		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R551				
~		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R564				
R565		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R566		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R567		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R568		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R569		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R570		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R571		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R572		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R573		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R574		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R575				
~		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R580				
R581		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R582				
~		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R590				
R591		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R592		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R593				
~		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
R596				
R801		4822 051 30102	CHIP 1kΩ ±5% 1/16W	NN05102610
R802		4822 051 30102	CHIP 1kΩ ±5% 1/16W	NN05102610
R811		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R812		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R813			1 kΩ ±1% 1/4W	GM11410010
R814			1 kΩ ±1% 1/4W	GM11410010
R815			1.62kΩ ±1% 1/6W	GM11416210
R816			1.62kΩ ±1% 1/6W	GM11416210
R819		4822 051 30272	CHIP 2.7kΩ ±5% 1/16W	NN05272610
R820		4822 051 30272	CHIP 2.7kΩ ±5% 1/16W	NN05272610
R821		4822 051 30102	CHIP 1kΩ ±5% 1/16W	NN05102610
R823			6.49kΩ ±1% 1/6W	GM11464910
R824			6.49kΩ ±1% 1/6W	GM11464910
R825		9965 000 06836	TRIMMING 1kΩ B 0.3W	RA01021100
			RH068 CERMET	
R826		9965 000 06836	TRIMMING 1kΩ B 0.3W	RA01021100
			RH068 CERMET	
R827			1kΩ ±1% 1/6W	GM11410010
R828			1kΩ ±1% 1/6W	GM11410010
R841		4822 051 20101	CHIP 100Ω ±5% 1/10W	NI05101110
R851		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R852		5322 116 55549	100.0Ω 1% 1/4W	NR01101140
R853		9965 000 06837	2.7kΩ ±1% 1/4W ERD	NR01272140
R854		9965 000 05737	3.3kΩ ±1% 1/4W ERD	NR01332140
R855		9965 000 06837	2.7kΩ ±1% 1/4W ERD	NR01272140
R856		9965 000 05737	3.3kΩ ±1% 1/4W ERD	NR01332140
R861			330Ω ±5% 1/6W	GD05331160

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
R863			820Ω ±5% 1/6W	GD05821160
R864			3.3kΩ ±5% 1/6W	GD05332160
R865		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610
R867		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
R869		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
RN01	F1, /U1		1kΩ ±5% 1/6W	GD05102160
RN01	N1	4822 130 80132	ZENER DIODE 3.9V	HD30391000
RN02		9965 000 06699	CHIP 3.9MΩ ±5% 1/16W	NN05395610
RN03	F1, /U1	4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610
RN03	N1	4822 116 83819	CHIP 18kΩ ±5% 1/16W	NN05183610
RN04		4822 117 12925	CHIP 47kΩ ±5% 1/16W	NN05473610
RN05		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610
RN06			2.2kΩ ±5% 1/6W	GD05222160
RN07		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
RN08		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610
RN09		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
RN10		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610
RN11		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
RN12		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
RN14		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610
RN15		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610
RN16		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610
RN17		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
RN18		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610
RN19		4822 117 13632	CHIP 100kΩ ±5% 1/6W	NN05104610
RN22		4822 117 13632	CHIP 100kΩ ±5% 1/16W	NN05104610
RN23		4822 051 30332	CHIP 3.3kΩ ±5% 1/16W	NN05332610
RN24		4822 117 12925	CHIP 47kΩ ±5% 1/16W	NN05473610
RN25		4822 051 30333	CHIP 33kΩ ±5% 1/16W	NN05333610
RN26		4822 117 13632	CHIP 100kΩ ±5% 1/16W	NN05104610
RN27		4822 051 30332	CHIP 3.3kΩ ±5% 1/16W	NN05332610
RN31		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
RN32		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610
RN33		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610
RT01		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
RT02		4822 051 30479	CHIP 47Ω ±5% 1/16W	NN05470610
RT03		4822 051 30759	CHIP 75Ω 1/16W	NN05750610
RY45		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610
RY50		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
RY51		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
RY52		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610
RY53		4822 117 12925	CHIP 47kΩ ±5% 1/16W	NN05473610
RY54		4822 117 12925	CHIP 47kΩ ±5% 1/16W	NN05473610
RY55		4822 117 12925	CHIP 47kΩ ±5% 1/16W	NN05473610
RY56		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610
RY57			47Ω ±5% 1/6W	GD05470160
RY58			47Ω ±5% 1/6W	GD05470160
RY61		4822 051 20332	CHIP 3.3kΩ ±5% 1/10W	NI05332110
			PP16-SEMICONDUCTORS	
⚠ D801				
~		9965 000 06834	CHIP DIODE NSQ03A02L(SBD)	HZ20009100
⚠ D808				
⚠ D811				
~		9965 000 06835	CHIP DIODE EC21QS03L	HZ20013100
⚠ D814				
D815		4822 130 31253	ZENER DIODE HZ2CLL 2.4V (±02.V)	HD30067010
D816		4822 130 31253	ZENER DIODE HZ2CLL 2.4V (±02.V)	HD30067010
D817		4822 130 32362	DIODE 1SS176.MA165.1SS254 30W 0.1A	HD20002000
D818		4822 130 32362	DIODE 1SS176.MA165.1SS254 30W 0.1A	HD20002000
⚠ D821				
~		4822 130 11513	CHIP DIODE RB161L-40	HZ20057210
⚠ D824			1A 40V SHOTKEY	

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
⚠ D851				
~		4822 130 83287	CHIP DIODE D1FS6 POWER	HZ20002290
⚠ D854				
⚠ D856		4822 130 32697	ZENER DIODE HZ6L(3) 6.2V	HD30021010
⚠ D857		4822 130 32697	ZENER DIODE HZ6L(3) 6.2V	HD30021010
D859		4822 130 32362	DIODE 1SS176.MA165.1SS254 30V 0.1A	HD20002000
D861		4822 130 83142	ZENER DIODE 6.2V	HD30621000
D869		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
⚠ DN01				
~		4822 130 11513	CHIP DIODE RB161L-40	HZ20057210
⚠ DN05			1A 40V SHOTKEY	
DN09		4822 130 33948	ZENER DIODE 5.6V	HD30561000
DN10		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
DN11		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
DN12		4822 130 80132	ZENER DIODE 3.9V	HD30391000
DN34		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
DN35		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
DY11		4822 130 10667	ZENER DIODE 4.7V	HD30471000
DY51		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
⚠ DY52		4822 130 80839	DIODE S5688G VRM=400V 1A	HD20029050
⚠ DY53		4822 130 80839	DIODE S5688G VRM=400V 1A	HD20029050
⚠ DY61				
~		4822 130 80839	DIODE S5688G VRM=400V	HD20029050
⚠ DY64			IO=1A	
DY65		4822 130 80116	ZENER DIODE 24V	HD32401000
DY66		4822 130 32362	DIODE 1SS176 MA165 1SS254 30V 0.1A	HD20002000
Q491		4822 130 61541	CHIP TRS. 2SC4116	HX341162B0
Q492		4822 130 61355	CHIP TRS. 2SC2712 0 Y	HX327122A0
Q493		4822 130 61541	CHIP TRS. 2SC4116	HX341162B0
Q494		4822 130 63598	CHIP TRS. 2SA1586 0 Y	HX115862A0
Q501		4822 209 15921	IC RESET IC S-806D-Z SEIKO	HC10077530
Q502		9965 000 05912	IC 74HCT244AF	HC724400Q0
Q503		4822 209 32984	IC TC7SHU04F 1PACKINV	HC10427050
Q504		9965 000 06826	MICROPROCESSOR µPD78P018FGC	HS392KN00F
Q505		4822 209 15923	IC TDA1307	HC10139490
Q506		4822 209 91176	IC 74HC257AF	HC725705R0
Q507		4822 209 32984	IC TC7SHU04F	HC10427050
Q508		4822 209 32984	IC TC7SHU04F	HC10427050
Q509		4822 209 61494	IC 74HC74 FLAT	HC707400Z0
Q510		9965 000 06827	IC TC74HC174AF	HC717405Z0
Q511		5322 209 17088	IC TC74HC164AF	HC716405Z0
Q512		5322 209 17088	IC TC74HC164AF	HC716405Z0
Q513		4822 209 61494	IC TC74HC74AF	HC707405Z0
Q514		9965 000 06828	IC TC75HC86AF	HC708605Z0
Q515		9965 000 06829	IC TC74HC597AF	HC759705Z0
Q516		9965 000 06829	IC TC74HC597AF	HC759705Z0
Q517		4822 209 15997	IC TC74HC393AF	HC739305R0
Q518		5322 209 16682	IC TC74HC123AF	HC712300Z0
Q519		4822 209 90909	IC TC7W74FU	HC10400050
Q520		4822 209 32984	IC TC7SHU04F 1PACKINV	HC10427050
⚠ Q801		4822 209 17381	IC PQ05RD21 5V 2A	HC31905320
⚠ Q802		4822 209 17381	IC PQO5RD21 5V 2A	HC31905320
Q803		9965 000 03397	IC BA033FP 3.3V 1APD=1W VD=0.3V	HC96J33210
Q811		4822 130 42836	F.E.T. 2SK246 GR	HF202461C0
Q812		4822 130 42836	F.E.T. 2SK246 GR	HF202461C0
⚠ Q813		4822 130 11605	TRS. 2SD1415A	HT41415100

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
⚠ Q814		4822 130 11604	TRS. 2SB1020A	HT21020100
Q815		4822 130 43233	TRS. 2SC2240 GR OR BL	HT322402A0
Q816		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0
Q817		4822 130 43233	TRS. 2SC2240 GR OR BL	HT322402A0
Q818		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0
⚠ Q821		4822 209 17437	IC PQ09RF1	HC31909320
Q841		4822 130 43954	CHIP TRS.2SD999	HX409992A0
Q851		4822 130 42836	F.E.T. 2SK246 GR	HF202461C0
⚠ Q852		4822 130 11605	TRS. 2SD1415A	HT41415100
Q853		4822 130 43233	TRS. 2SC2240 GR OR BL	HT322402A0
Q855		4822 130 42836	F.E.T. 2SK246 GR	HF202461C0
⚠ Q856		4822 130 11604	TRS. 2SB1020A	HT21020100
Q857		4822 130 42949	TRS. 2SA970 GR OR BL	HT109702A0
Q861		4822 130 42734	CHIP TRS. 2SB798 DL DK	HX207982A0
Q863		4822 130 61311	CHIP TRS. 2SA1162 O.Y	HX111622A0
Q864		4822 130 61311	CHIP TRS. 2SA1162 O.Y	HX111622A0
Q865		4822 130 61553	DIG.TRS. DTC124EUA(T106)	BA21303000
Q866		4822 130 63598	CHIP TRS. 2SA1586 O Y	HX115862A0
QN01		4822 130 61541	CHIP TRS. 2SC4116	HX341162B0
QN02		4822 130 61541	CHIP TRS. 2SC4116	HX341162B0
QN03		4822 130 61541	CHIP TRS. 2SC4116	HX341162B0
QN04		4822 130 61355	CHIP TRS. 2SC2712 0 Y	HX327122A0
QN05		4822 130 61311	CHIP TRS. 2SA1162 0 Y	HX111622A0
QN06		4822 130 61311	CHIP TRS. 2SA1162 0 Y	HX111622A0
QN09		4822 130 61541	CHIP TRS. 2SC4116	HX341162B0
QN12		4822 130 61541	CHIP TRS. 2SC4116	HX341162B0
QN13		4822 130 61541	CHIP TRS. 2SC4116	HX341162B0
QN21		4822 209 83312	IC TA7317P RELEY DRIVER IC	HC10042050
QN32		4822 130 61311	CHIP TRS. 2SA1162 0 Y	HX111622A0
QN33		4822 130 61541	CHIP TRS. 2SC4116	HX341162B0
QT01		4822 209 31423	IC IC TC7W04F	HC700405W0
QY10		4822 130 61541	CHIP TRS. 2SC4116	HX341162B0
QY11		4822 130 63838	DIG.TRS. HN1A01F Y GR	BA10011050
QY12		4822 130 60839	TRS. 2SC2458 Y OR GR	HT324582B0
QY51		4822 130 61355	CHIP TRS. 2SC2712 0 Y	HX327122A0
QY61		4822 130 42734	CHIP TRS. 2SB798 DL DK	HX207982A0
			PP16-SEMICONDUCTORS	
⚠ F801	F1, /U1		FUSE 1.6A 250V UL CSA MITI	FS10160350
⚠ F811	F1, /U1		FUSE 1A 250V UL CSA MITI	FS10100350
⚠ F811	N1	4822 070 38001	FUSE T800MA 250V BS	FS10080850
⚠ F812	F1, /U1		FUSE 1A 250V UL CSA MITI	FS10100350
⚠ F812	N1	4822 070 38001	FUSE T800MA 250V BS	FS10080850
⚠ F821	F1, /U1		FUSE 1A 250V UL.CSA.MITI	FS10100350
⚠ F821	N1	4822 070 38001	FUSE T800MA 250V BS	FS10080850
⚠ F851	F1, /U1		FUSE 1A 250V UL CSA MITI	FS10100350
⚠ F851	N1	4822 070 38001	FUSE T800MA 250V BS	FS10080850
⚠ F852	F1, /U1		FUSE 1A 250V UL CSA MITI	FS10100350
⚠ F852	N1	4822 070 38001	FUSE T800MA 250V BS	FS10080850
⚠ G801		4822 121 20263	NOISE KILLER 0.47µF+6.8Ω	BF47400010
⚠ G810		4822 121 20263	NOISE KILLER 0.47µF+6.8Ω	BF47400010
⚠ G850		4822 121 20263	NOISE KILLER 0.47µF+6.8Ω	BF47400010
JT01		4822 265 11582	TERMINAL 1P RCA PIN JACK	YT02011000
JT03		4822 130 10845	OPT. CONNECTOR GP1F32T	YJ15000090
L501		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
L502		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
L503		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
L504		4822 157 11192	CHIP INDUCTANCE 3.3µH	LU12332010
L505 ~ L509		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
L803		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
L804		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
L805		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
LT01		4822 142 60422	PULSE TRANSF.(TPS247MN-0386AN)	TP41042030

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
LT02		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
LT03		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
LY51		4822 280 10353	RELAY DC9V NA-9-WK	LY20090090
S401		4822 277 21559	SLIDE SWITCH FILTER CD/SACD	SS02021150
X501		4822 242 10818	CRYSTAL XTAL 33.8688MHz	JX33001380
X503		9965 000 01927	SERAMIC VIB. CSTCC10.0MG RESONATOR 10MHz	FQ01005020
			PS16-RERAY CIRCUIT BOARD	
DF01 ~ DF05		4822 130 81324	CHIP DIODE 1SS302	HZ20018050
JF03			JACK 29P FFC CONECTOR 9604S-29F SID	YJ07011220
RY02		4822 116 82487	CHIP 0Ω ±5% 1/16W	NN05000610
			PT16-FRONT CIRCUIT BOARD 2 (TACT SW)	
RY06		4822 117 12968	CHIP 820Ω ±5% 1/16W	NN05821610
RY08		4822 117 11817	CHIP 1.2kΩ ±5% 1/16W	NN05122610
SY03 ~ SY05		4822 276 13408	PUSH SWITCH SKHVBF 260GF RED	SP01012030
SY07		4822 276 13408	PUSH SWITCH SKHVBF 260GF	SP01012030
SY08		4822 276 13408	PUSH SWITCH SKHVBF 260GF	SP01012030
			PT26-FRONT CIRCUIT BOARD 3 (IR/TACT)	
			PB04-CAPACITORS	
CY03		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200
CY04		4822 124 90354	ELECT. 100µF M 16V RA-2	OA10701620
			PT26-RESISTORS	
RY01		4822 116 82487	CHIP 0Ω ±5% 1/16W	NN05000610
RY03		4822 051 30471	CHIP 470Ω ±5% 1/16W	NN05471610
RY04		4822 051 30681	CHIP 680Ω ±5% 1/16W	NN05681610
RY09		4822 051 30222	CHIP 2.2kΩ ±5% 1/16W	NN05222610
RY10		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
RY11		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
RY12		4822 051 30101	CHIP 100Ω ±5% 1/16W	NN05101610
RY29		4822 051 30471	CHIP 470Ω ±5% 1/16W	NN05471610
RY30		4822 051 30681	CHIP 680Ω ±5% 1/16W	NN05681610
RY41		4822 051 30223	CHIP 22kΩ ±5% 1/16W	NN05223610
RY42		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610
RY43		4822 051 30472	CHIP 4.7kΩ ±5% 1/16W	NN05472610
RY44		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610
			PT26-SEMICONDUCTORS	
QY07		4822 130 61311	CHIP TRS. 2SA1162 0 Y	HX111622A0
QY08		4822 130 61355	CHIP TRS. 2SC2712 0 Y	HX327122A0
			PT26-MISCELLANEOUS	
SY01		4822 276 13408	PUSH SWITCH SKHVBF 260GF RED	SP01012030
SY02		4822 276 13408	PUSH SWITCH SKHVBF 260GF	SP01012030
SY06		4822 276 13408	PUSH SWITCH SKHVBF 260GF	SP01012030
ZY01		9965 000 06833	PHOTO UNIT RPM6936-H4	HW10008210
			PY16-FRONT CIRCUIT BOARD 1 (FL/LED)	
			PY16-CAPACITORS	
CY01		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200
CY02		4822 124 90352	ELECT. 10µF M 16V RA-2	OA10601620
CY05		4822 126 11687	CHIP CER. 0.1µF +80%-20%	DK98104200
CY06		4822 126 11671	CHIP CER. 33pF ±5% CG 50V	DD95330300
CY07		4822 126 11671	CHIP CER. 33pF ±5% CG 50V	DD95330300
CY08		4822 126 11671	CHIP CER. 33pF ±5% CG 50V	DD95330300

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
CY10			CHIP CER. 0.1μF ±10% B 25V	DK56104200
			PY16-RESISTORS	
RY13		4822 051 30102	CHIP 1kΩ ±5% 1/16W	NN05102610
RY14		4822 051 30102	CHIP 1kΩ ±5% 1/16W	NN05102610
RY15		4822 051 30102	CHIP 1kΩ ±5% 1/16W	NN05102610
RY16 ~ RY23		4822 051 30333	CHIP 33kΩ ±5% 1/16W	NN05333610
RY25		4822 051 30333	CHIP 33kΩ ±5% 1/16W	NN05333610
RY26		4822 051 30333	CHIP 33kΩ ±5% 1/16W	NN05333610
RY31		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610
RY32		4822 116 83829	CHIP 270Ω ±5% 1/16W	NN05271610
RY33			560Ω ±5% 1/6W	GD05561160
RY34		4822 051 30103	CHIP 10kΩ ±5% 1/16W	NN05103610
RY35		4822 116 83829	CHIP 270Ω ±5% 1/16W	NN05271610
RY36			560Ω ±5% 1/6W	GD05561160
			PY16-SEMICONDUCTORS	
DY05		4822 130 80326	L.E.D. LT3D8B RED 3O	HI10062320
DY06		4822 130 80326	L.E.D. LT3D8B RED 3O	HI10062320
QY01		9965 000 06830	IC MN12510F FTD DRIVER	HC10171020
QY03		9965 000 06828	IC TC75HC86AF	HC708605Z0
QY05		4822 130 61311	CHIP TRS. 2SA1162 0 Y	HX111622A0
QY06		4822 130 61311	CHIP TRS. 2SA1162 0 Y	HX111622A0
			PY16-MISCELLANEOUS	
LY01 ~ LY04		4822 158 60654	CHIP INDUCTOR BLM31A02	FC90030070
VY01		4822 135 00194	DISPLAY UNIT 10-BT-196GK	HQ31004410
XY01		4822 242 81283	SERAMIC VIB. EF0V4004E5	FQ04004070

Service Manual

CDM-10M

SACD Module

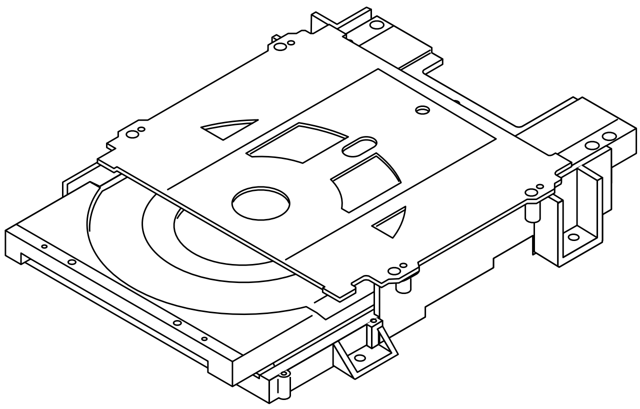


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Please use this service manual with referring to the user guide (D.F.U.) without fail.
修理の際は、必ず取扱説明書を準備し操作方法を確認の上作業を行ってください。

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CDM-10M

2.1 REMOVING AND REINSTALLING THE MAIN PARTS

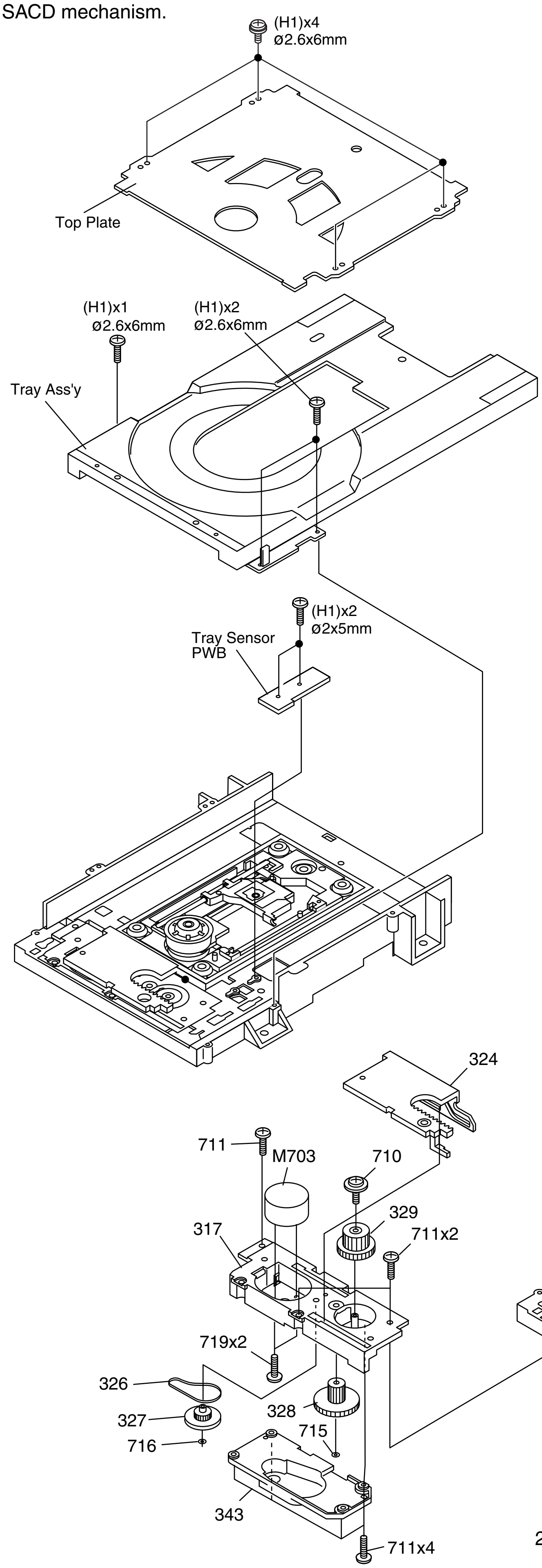
SACD MECHANISM SECTION

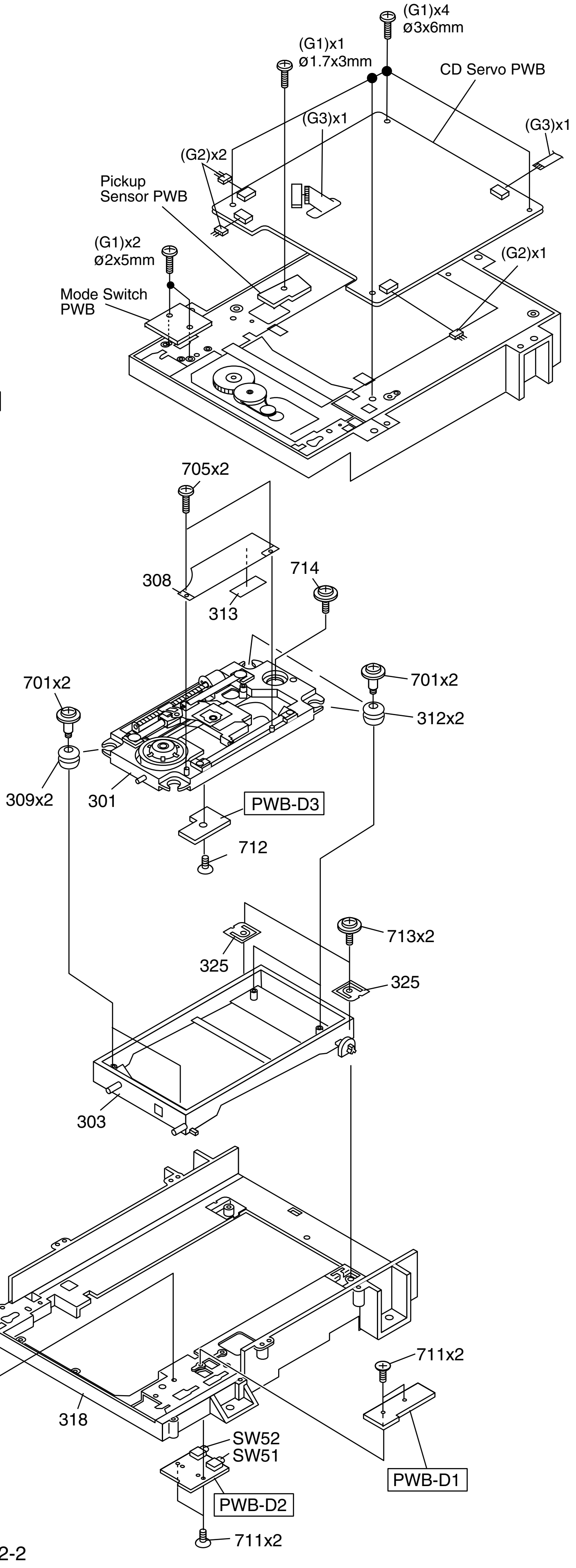
Perform steps of the disassembly method to remove the SACD mechanism.

■主要部品の交換方法

SACDメカニズム部

・分解方法に従ってSACDメカニズムを取り外して下さい。





How to remove the loading motor (See Fig. 2-1.)

1. Remove the lift lever.
2. Remove the screws (A1) x 4 pcs., to remove the gear cover.
3. Remove the screws (A2) x 2 pcs., to remove the loading motor.

●ローディングモータの取り外し方法（図2-1参照）

１. リフトレバーを取り外す。
２. ねじ（Ａ１）×４本を取り外しギヤカバーを取り外す。
３. ねじ（Ａ２）×２本を取り外しローディングモータを取り外す。

(Adjusting the SACD mechanism completed products)

It is necessary to position the spindle motor, the sub-shaft (mechanism), and the pickup to play a nonstandardized SACD disc. If the pickup or motor is replaced at the service division, these adjustments cannot be performed because of the facility and measuring equipment matters.

The SACD mechanism completed products are adjusted for the above reasons.

After installing:

After installing the SACD mechanism completed product, remove the two solders shown below.**(See Fig. 2-2.)**

[REMARK]

- The two solders are used to eliminate static electricity before installing the SACD mechanism completed product.

SACDメカニズムの交換

ＳＡＣＤメカニズム（３０１）を交換した際には、必ず下図（図2-2）の２ヶ所のハンダ（ＳＡＣＤメカニズム保管時の静電破壊防止）を取り除いてください。

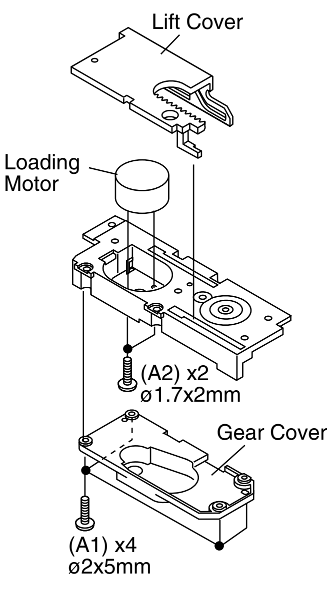


Figure 2-1

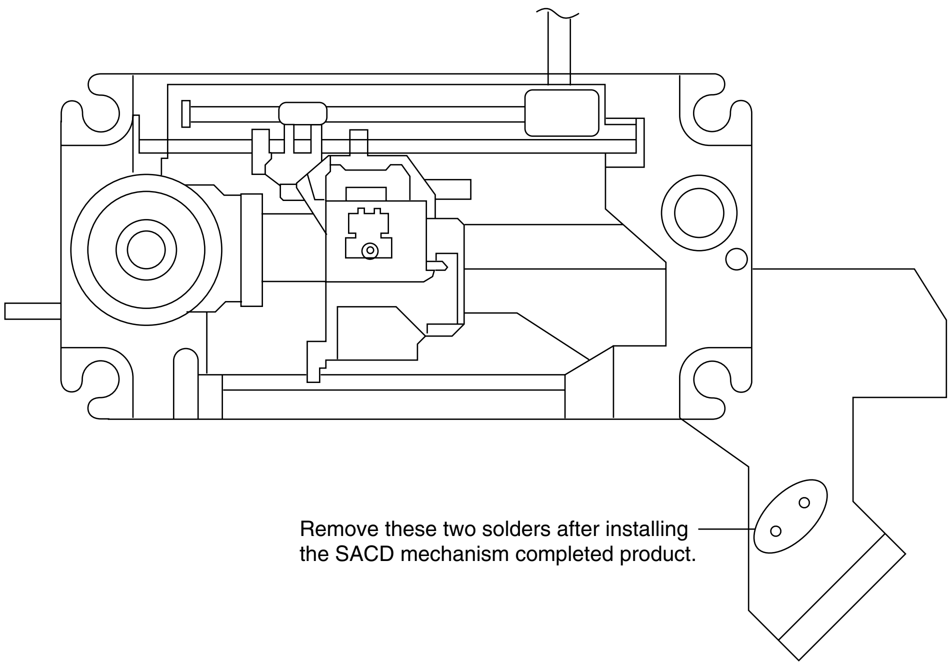


Figure 2-2

Adjusting the tension of the timing belt
Remove the gear unit and connect the ammeter to the DC power as shown in Fig. 2-3.

●タイミングベルトのテンション調整
ギヤユニットを取り外し、図2－3の様に電流計とDC電源を接続する。

If measurement of the loading motor current is possible, move the motor in the direction of the arrow so as to obtain 40 - 50 mA, and fix the motor with screws (A1) x 2 pcs. (See Fig. 2-4.)

ローディングモータの電流測定が出来る様にして40mA～50mAになる様モータを矢印方向に移動させ、ねじ（Ａ１）×2本でモータを固定する。（図2-4参照）

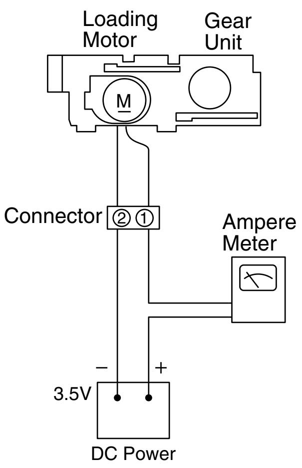


Figure 2-3

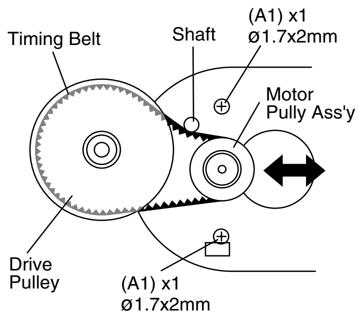
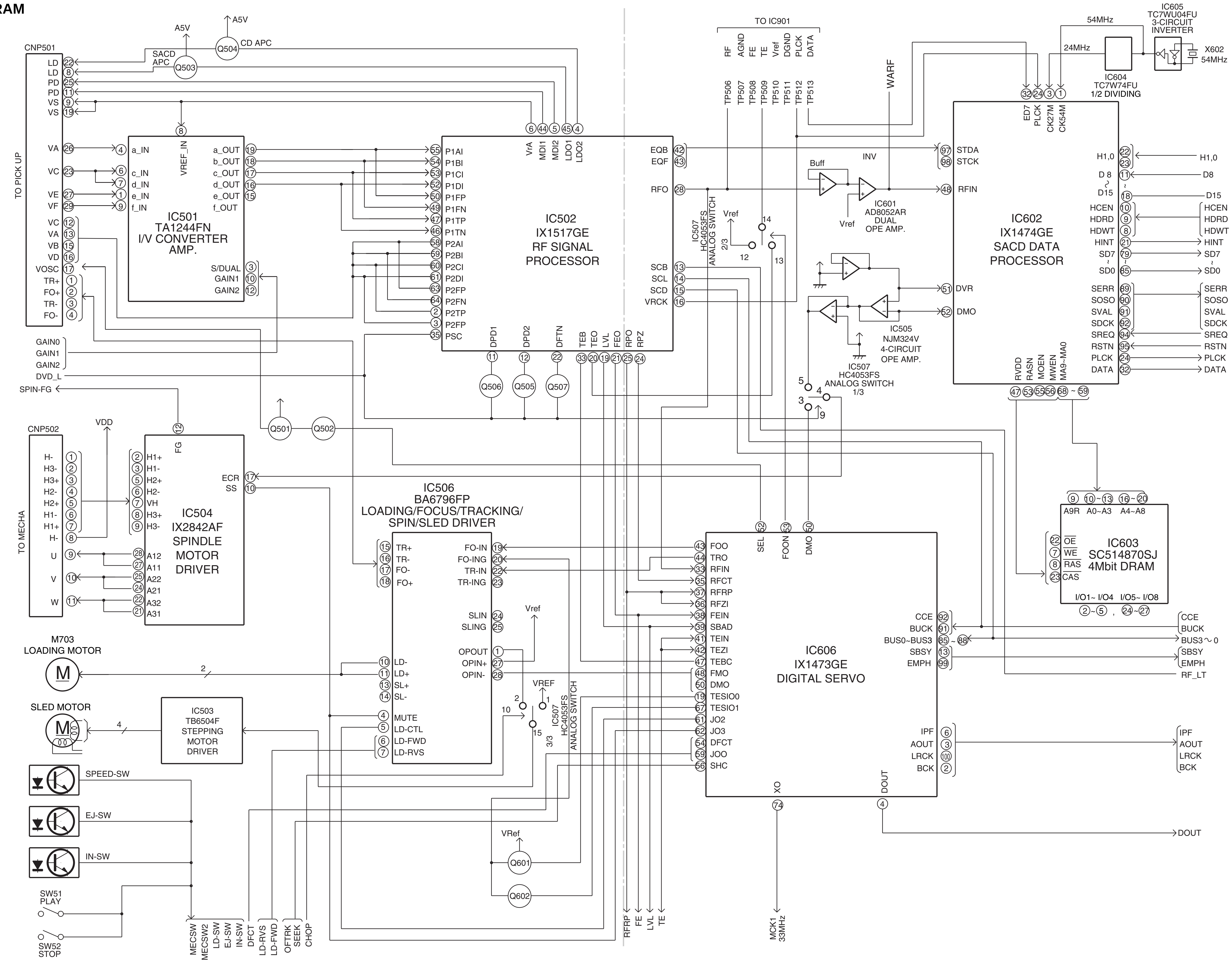
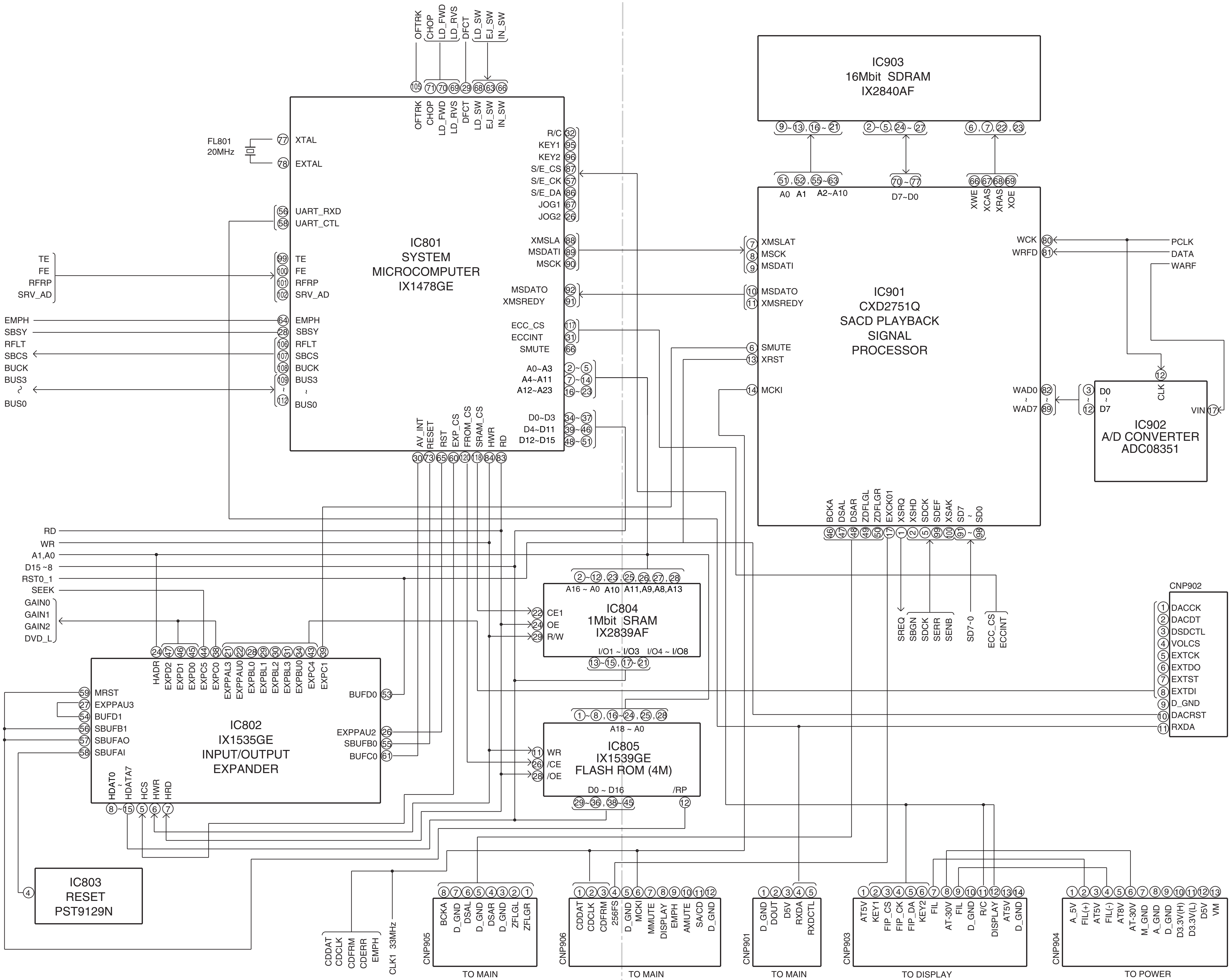


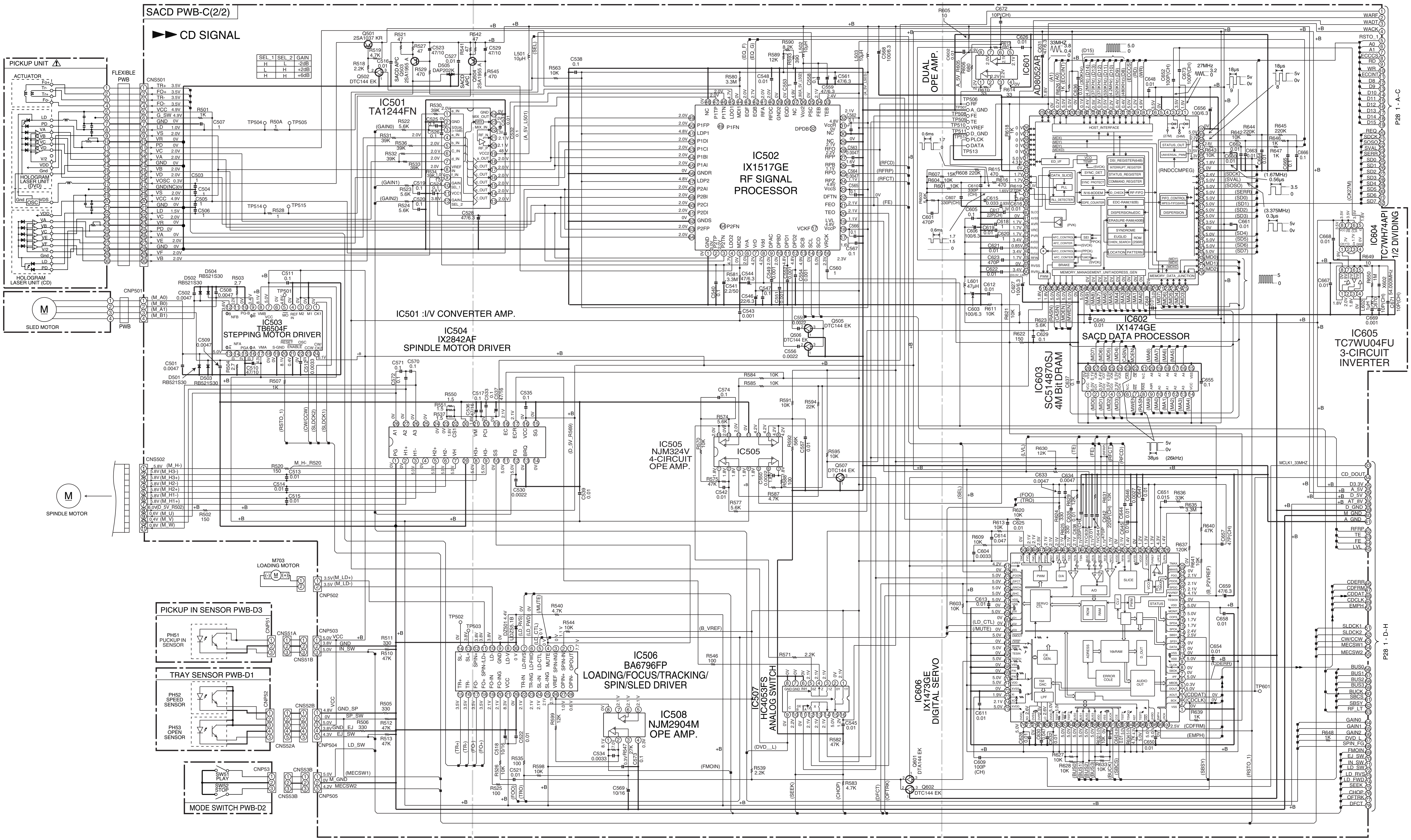
Figure 2-4

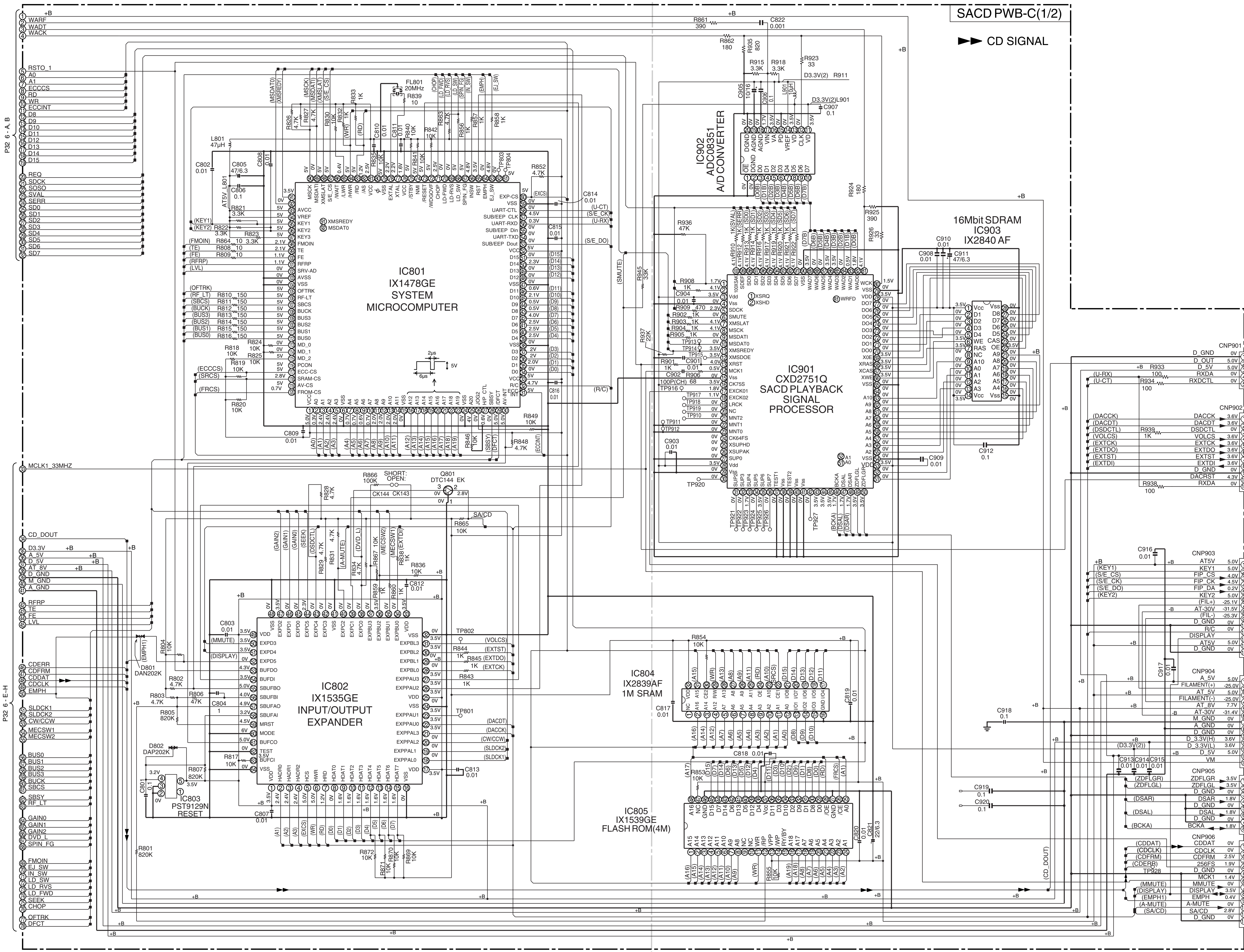
2.2 BLOCK DIAGRAM



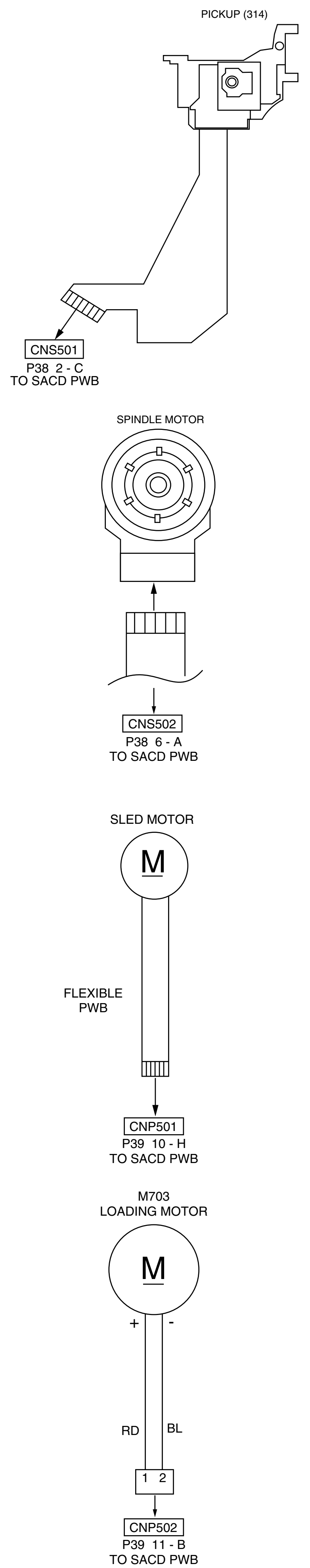

IC801
SYSTEM
MICROCOMPUTER
IX1478GE
IC802
IX1535GE
INPUT/OUTPUT
EXPANDER
IC803
RESET
PST9129N
IC804
1Mbit SRAM
IX2839AF
IC805
IX1539GE
FLASH ROM (4M)
IC901
CXD2751Q
SACD PLAYBACK
SIGNAL
PROCESSOR
IC902
A/D CONVERTER
ADC08351
IC903
16Mbit SDRAM
IX2840AF
FL801
20MHz
XTAL
EXTAL
UART_RXD
UART_CTL
TE
FE
RFRP
SRV_AD
EMPH
SBSY
RFLT
SBCS
BUCK
BUS3
BUS0
OFTRK
CHOP
LD_FWD
LD_RVS
DFCT
LD_SW
EJ_SW
IN_SW
R/C
KEY1
KEY2
S/E_CS
S/E_CK
S/E_DA
JOG1
JOG2
XMSLA
MSDATI
MSCK
MSDATO
XMSREDY
ECC_CS
ECCINT
SMUTE
A0~A3
A4~A11
A12~A23
D0~D3
D4~D11
D12~D15
AV_INT
RESET
RST
EXP_CS
FROM_CS
SRAM_CS
HWR
RD
XMSLAT
MSCK
MSDATI
MSDATO
XMSREDY
SMUTE
XRST
MCKI
WCK
WRFD
PCLK
DATA
WARF
WAD0
WAD7
D0
D7
CLK
VIN
A0 A1 A2~A10
D7~D0
XWE
XCAS
XRAS
XOE
BCKA
DSAL
DSAR
ZDFLGL
ZDFLGR
EXCK01
XSRQ
XSHD
SDCK
SDEF
XSAK
SD7 ~ SD0
SREQ
SBGN
SDCK
SERR
SENB
SD7~0
ECC_CS
ECCINT
RD
WR
A1,A0
D15 ~8
RST0_1
SEEK
GAIN0
GAIN1
GAIN2
DVD_L
A16 ~ A0
A10
A11,A9,A8,A13
CE1
OE
R/W
I/O1 ~ I/O3
I/O4 ~ I/O8
A18 ~ A0
WR
/CE
/OE
D0 ~ D16
/RP
MRST
EXPPAU3
BUFD1
SBUFB1
SBUFAO
SBUFAI
HADR
EXPD2
EXPD1
EXPD0
EXPC5
EXPC0
EXPPAL3
EXPPAU0
EXPBL0
EXPBL1
EXPBL2
EXPBL3
EXPBU0
EXPC4
EXPC1
BUFD0
EXPPAU2
SBUFB0
BUFC0
HDAT0 ~ HDATA7
HCS
HWR
HRD
CNP902
DACCK
DACDT
DSDCTL
VOLCS
EXTCK
EXTDO
EXTST
EXTDI
D_GND
DACRST
RXDA
TO MAIN
CDDAT
CDCLK
CDFRM
CDERR
EMPH
CLK1 33MHz
CNP905
BCKA
D_GND
DSAL
D_GND
DSAR
D_GND
ZFLGL
ZFLGR
TO MAIN
CNP906
CDDAT
CDCLK
CDFRM
256FS
D_GND
MCKI
MMUTE
DISPLAY
EMPH
AMUTE
SA/CD
D_GND
TO MAIN
CNP901
D_GND
DOUT
D5V
RXDA
RXDCTL
TO MAIN
CNP903
AT5V
KEY1
FIP_CS
FIP_CK
FIP_DA
KEY2
FIL
AT-30V
FIL
D_GND
R/C
DISPLAY
AT5V
D_GND
TO DISPLAY
CNP904
A_5V
FIL(+)
AT5V
FIL(-)
AT8V
AT-30V
M_GND
A_GND
D_GND
D3.3V(H)
D3.3V(L)
D5V
VM
TO POWER

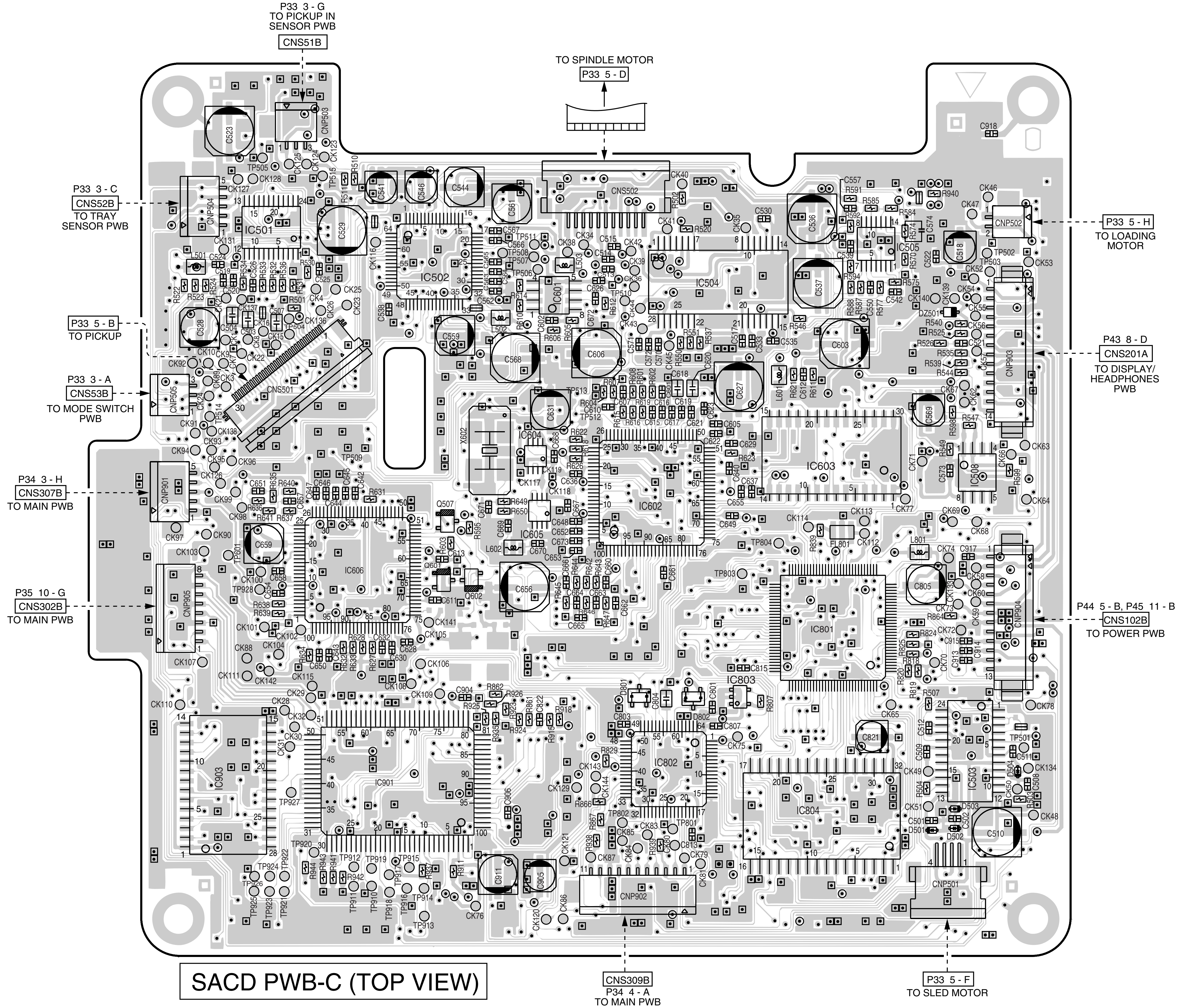
2.3 SCHEMATIC DIAGRAM



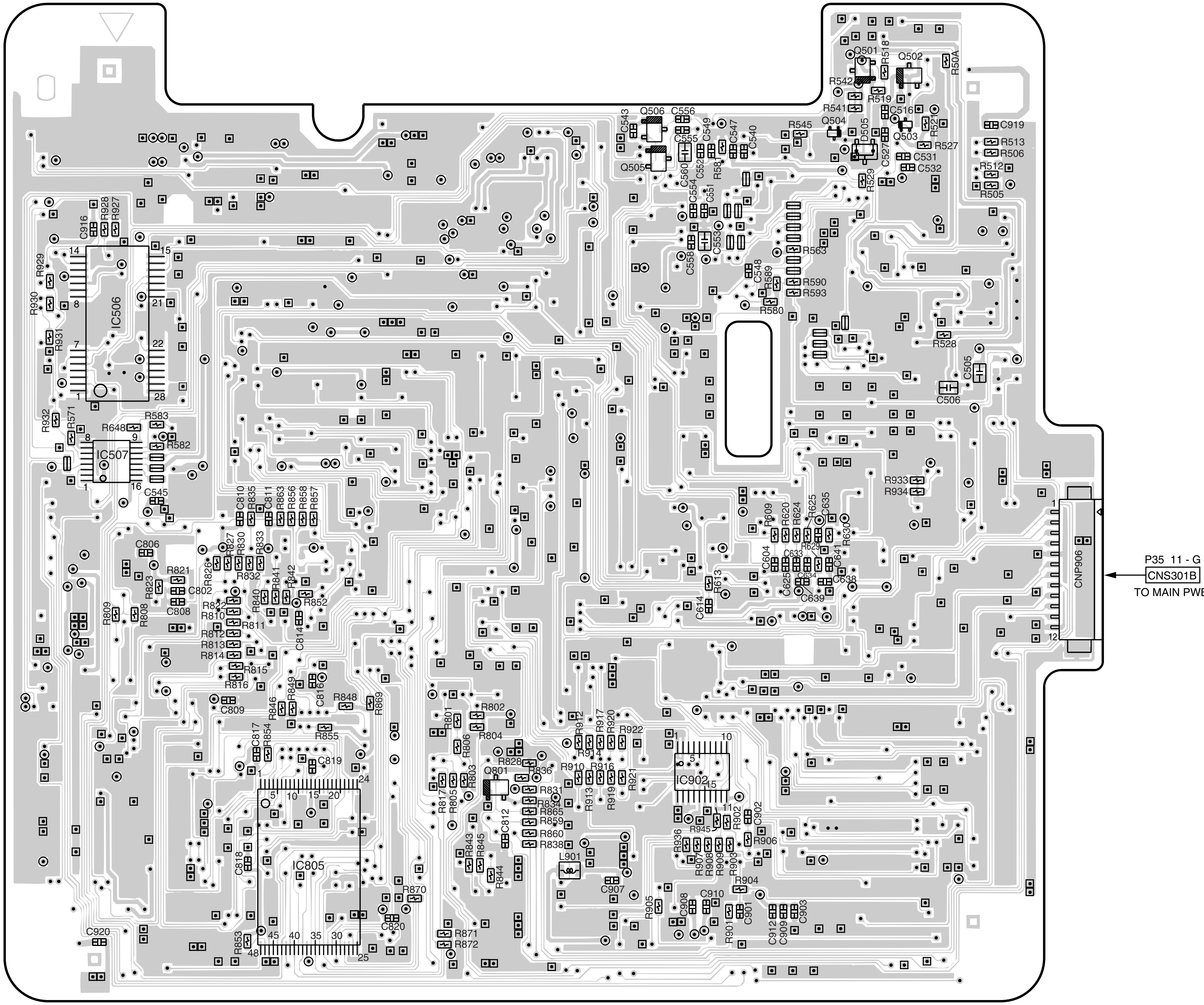

SACD PWB-C(1/2)
CD SIGNAL
IC801
IX1478GE
SYSTEM
MICROCOMPUTER
IC802
IX1535GE
INPUT/OUTPUT
EXPANDER
IC803
PST9129N
RESET
IC804
IX2839AF
1M SRAM
IC805
IX1539GE
FLASH ROM(4M)
IC901
CXD2751Q
SACD PLAYBACK
SIGNAL
PROCESSOR
IC902
ADC08351
A/D CONVERTER
16Mbit SDRAM
IC903
IX2840 AF
CNP901
CNP902
CNP903
CNP904
CNP905
CNP906
CNS307B
CNS309B
CNS201A
CNP102
CNS302B
CNS301B
TO MAIN PWB
TO DISPLAY PWB
TO POWER PWB
P32 6 - A, B
P32 6 - E~H
P21 11 - G
P20 1 - G
P22 1 - D
P24 1 - D, P26 1 - D
P20 1 - E
P20 1 - D

2.4 PARTS LOCATION

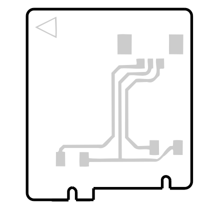




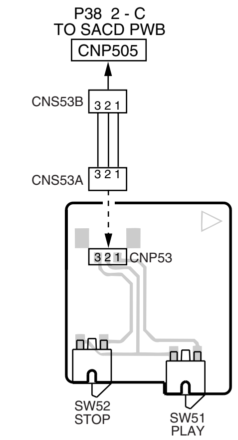
SACD PWB-C (TOP VIEW)



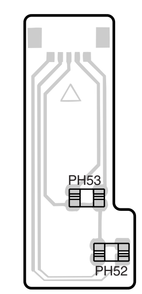
SACD PWB-C(BOTTOM VIEW)



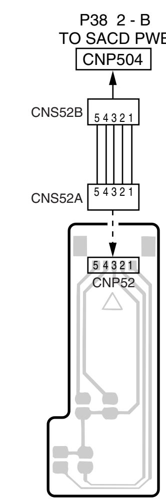
MODE SWITCH PWB-D2 (TOP VIEW)



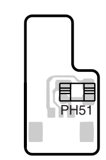
MODE SWITCH PWB-D2 (BOTTOM VIEW)



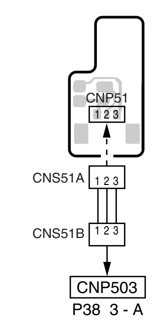
TRAY SENSOR PWB-D1 (TOP VIEW)



TRAY SENSOR PWB-D1 (BOTTOM VIEW)



PICKUP IN SENSOR PWB-D3 (TOP VIEW)



PICKUP IN SENSOR PWB-D3 (BOTTOM VIEW)

2.5 IC DATA

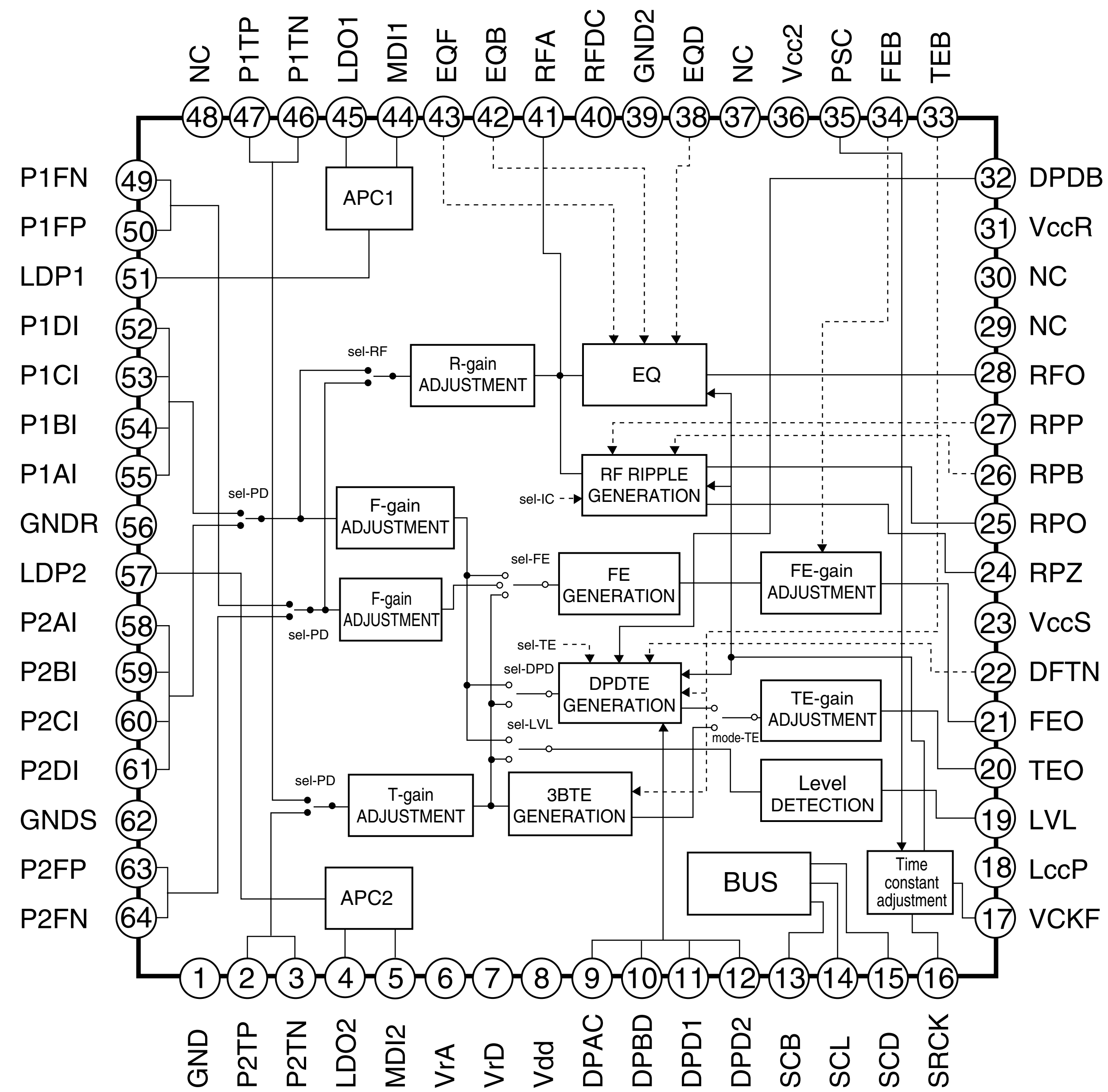
IC502 RH-iX1517GEZZ: RF Signal Processor (IX1517GE) (1/2)

Pin No.	Terminal Name	Input/Output	Function	Terminal DC Voltage (TYP.)	Remarks
1	GND	Ñ	GND terminal	-	
2	P2TP	Input	TE+ input (CD)	VrA	
3	P2TN	Input	TE- input (CD)	VrA	
4	LDO2	Output	Drive output	-	
5	MDI2	Input	Monitor output	-	
6	VrA	Output	Analog VREF	2.1 [V]	
7	VrD	Output	Digital VREF	-	1/2 of Vdd (2.1V)
8	VDD	Input	Power terminal		Approx. 4.2V
9	DPAC	-	DPD AC coupling capacity 1	-	
10	DPBD	-	DPD AC coupling capacity 2	--	
11	DPD1	-	DPD integration capacity 1	--	
12	DPD2	-	DPD integration capacity 2	-	
13	SCB	Input	Control line (Bit clock)	2.2 [V]	
14	SCL	Input	Control line (Latch signal)	2.2 [V]	
15	SCD	Input	Control line (Serial data)	2.2 [V]	
16	VRCK	Input	Reference clock input	2.3 [V]	Frequency increase results in shift to higher filter frequency except for servo LPF.
17	VCKF	-	Time constant adjustment capacity	-	
18	VCCP	-	Power terminal	-	
19	LVL	Output	Servo addition output	VrD x (1/2)	
20	TEO	Output	TE output	VrD	
21	FEO	Output	FE output	VrD	
22	DFTN	Input	DPD defect	-	DPD output at Low: Mute
23	VCCS	-	Power terminal (Servo)	-	
24	RPZ	Output	RF ripple center voltage	VrD	
25	RPO	Output	RF ripple output	VrD	
26	RPB	Output	RF ripple bottom	-	
27	RPP	Output	RF ripple peak	-	
28	RFO	Output	Equalizing RF output	2.3 [V]	
29,30	NC	-	NC terminal	-	Used by connecting to GND.
31	VCCR	-	Power terminal (RF)	-	
32	DPDB	Input	Pit depth adjustment	VrD	DPDB increase brings delay capacity increase on sides A and B.
33	TEB	Input	TE balance	VrD	TEB increase brings increase in gain on TP side and in delay capacity on sides A and C.
34	FEB	Input	FE balance	VrD	FEB increase brings increase in gain on sides A and C (FP).
35	PSC	Input	VRCK frequency division ON/OFF	-	Frequency division OFF at High
36	VCC2	-	Power terminal	-	
37	NC	-	NC terminal	VrD	Connected to GND via C.
38	EQD	Input	Group delay correction	VrD	Group delay by raising EQD: rise rightward
39	GND2	-	GND terminal	-	
40	RFDC	-	DC feedback capacity	-	
41*	RFA	Output	RF total adding output	2.2 [V]	
42	EQB	Input	Boost adjustment	VrD	Boost quantity up by raising EQB.
43	EQF	Input	Frequency adjustment	VrD	Shift to higher frequency by raising EQF.
44	MDI1	Input	Monitor input	-	
45	LDO1	Output	Drive output	-	
46	P1TN	Input	TE- input (DVD)	VrA	
47	P1TP	Input	TE+ input (DVD)	VrA	
48	NC	-	NC terminal	-	Used by connecting to GND.
49	P1FN	Input	FE- input (DVD)	VrA	

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC502 RH-iX1517GEZZ: RF Signal Processor (IX1517GE) (2/2)

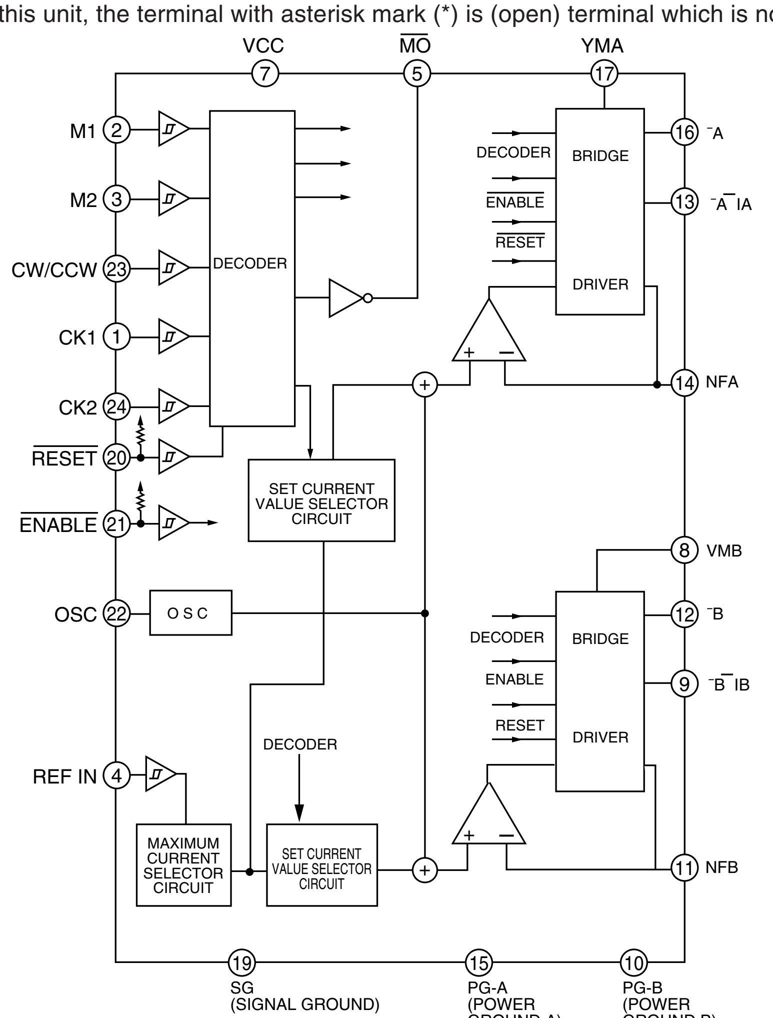
Pin No.	Terminal Name	Input/Output	Function	Terminal DC Voltage (TYP.)	Remarks
50	P1FP	Input	FE+ input	VrA	
51	LDP1	Input	APC polarity 1	-	Positive polarity when connecting to Vcc
52	P1DI	Input	D input (DVD)	VrA	
53	P1CI	Input	C input (DVD)	VrA	
54	P1BI	Input	B input (DVD)	VrA	
55	P1AI	Input	A input (DVD)	VrA	
56	GNDR	-	GND terminal (RF)	-	
57	LDP2	Input	APC polarity 2	-	Positive polarity when connecting to Vcc
58	P2AI	Input	A input (CD)	VrA	
59	P2BI	Input	B input (CD)	VrA	
60	P2CI	Input	C input (CD)	VrA	
61	P2DI	Input	D input (CD)	VrA	
62	GNDS	-	GND terminal (Servo)	-	
63	P2FP	Input	FE+ input	VrA	
64	P2FN	Input	FE- input	VrA	

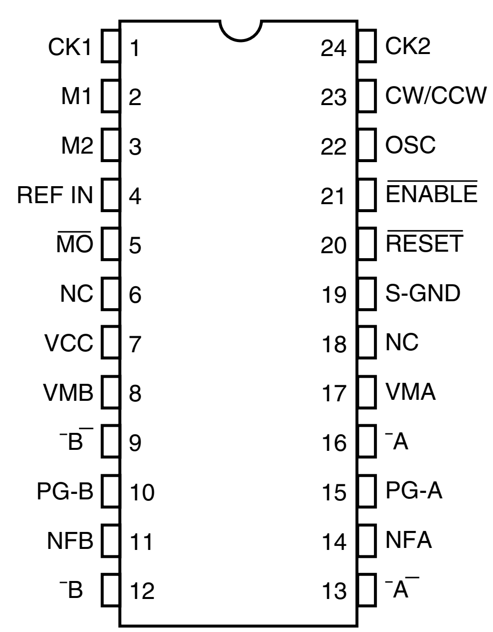


IC503 VHiTB6504F+-1: Stepping Motor Driver (TB6504F)

Pin No.	Terminal Name	Function
1	CK1	Clock signal input
2, 3	M1, M2	Excitation mode set terminal
4	REF IN	Output reference value (VNF) set terminal H: VNF=0.5V, L: VNF=0.25V
5*	$\overline{MO}$	Monitor output L: Initial condition
6*	NC	Not used
7	VCC	Logic side power terminal
8	VMB	Output side power terminal
9	ø$\overline{B}$	$\overline{B}$ output
10	PG-B	Power ground
11	NFB	B channel current detection terminal
12	øB	B output
13	ø$\overline{A}$	$\overline{A}$ output
14*	NFA	A channel current detection terminal
15	PG-A	Power ground
16	øA	A output
17	VMA	Output side power terminal
18*	NC	Not used
19	S-GND	Signal ground
20	$\overline{RESET}$	Reset signal input
21	$\overline{ENABLE}$	Enable signal input
22	OSC	Internal oscillation frequency set terminal. Capacitor is externally mounted.
23	CW/CCW	Clockwise/counterclockwise input
24	CK2	Clock signal input

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

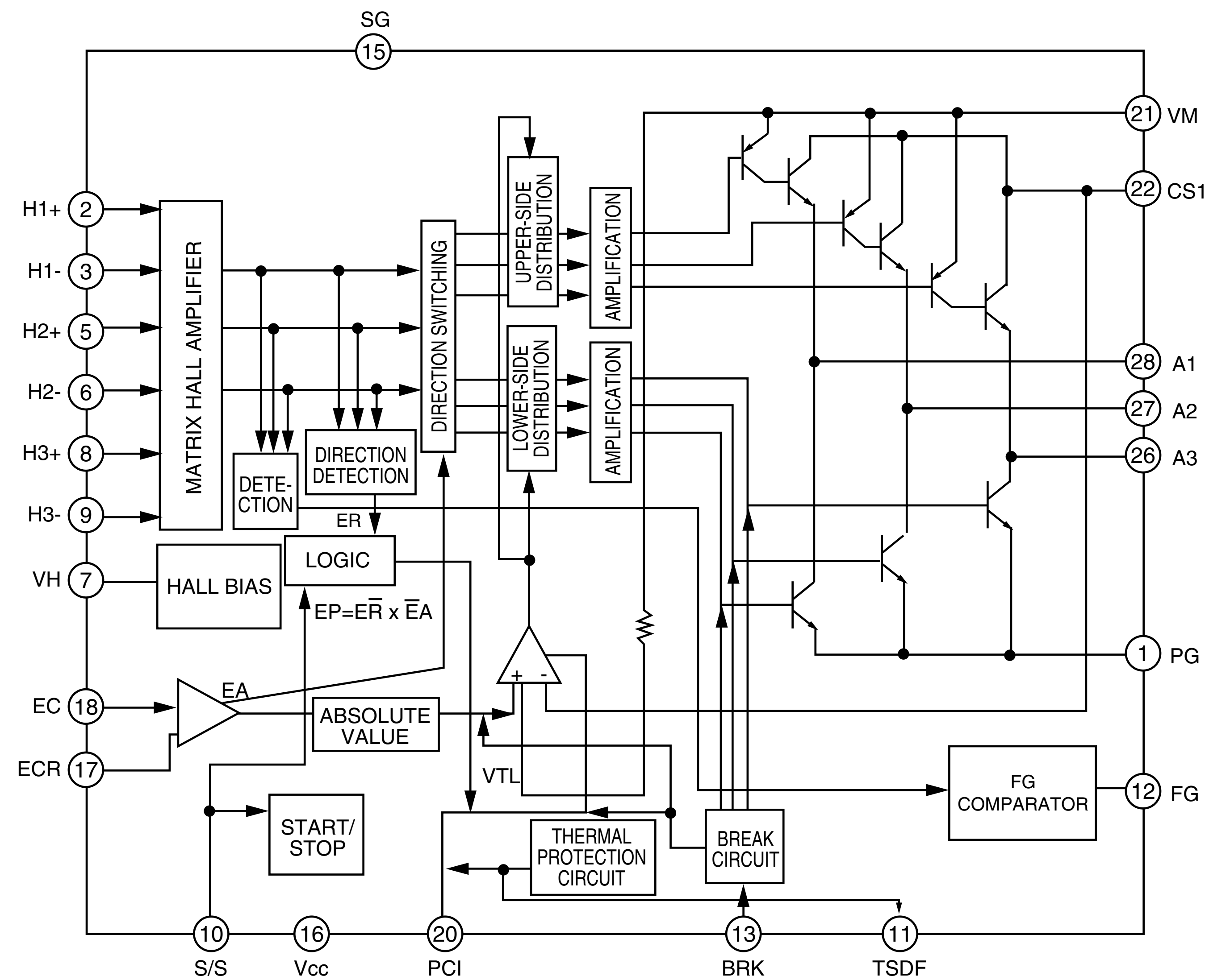




IC504 RH-iX2842AFZZ: Spindle Motor Driver (IX2842AF)

Pin No.	Terminal Name	Function	Pin No.	Terminal Name	Function
1	PG	Power GND terminal	15	SG	Signal GND terminal
2	H1+	Hall element 1 positive input terminal	16	VCC	Power terminal
3	H1-	Hall element 1 negative input terminal	17	ECR	Torque instruction reference input terminal
4*	NC	Not used	18	EC	Torque instruction input terminal
5	H2+	Hall element 2 positive input terminal	19*	NC	Not used
6	H2-	Hall element 2 negative input terminal	20	PCI	Current feedback phase compensating terminal
7	VH	Hall bias terminal	21	VM	Motor power terminal
8	H3+	Hall element 3 positive input terminal	22	CS1	Current detection terminal 1
9	H3-	Hall element 3 negative input terminal	23*	NC	Not used
10	SS	Start/Stop switching terminal	24*	NC	Not used
11*	TFLG	Thermal protection monitor terminal	25*	NC	Not used
12	FG	FG signal output terminal	26	A3	Drive output 3
13	BRK	Break mode set terminal	27	A2	Drive output 2
14*	NC	Not used	28	A1	Drive output 1

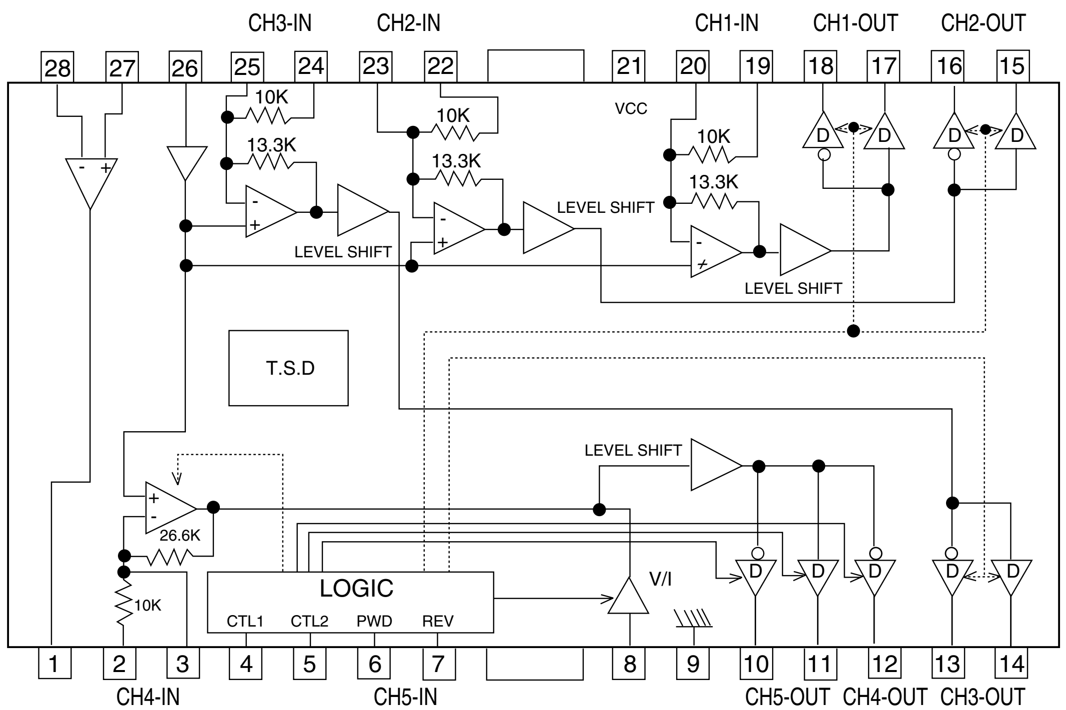
In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC506 VHiBA6796FP-1: Loading/Focus/Tracking/Spin/Sled Driver (BA6796FP)

Pin No.	Terminal Name	Function	Pin No.	Terminal Name	Function
1*	OPOUT	Operational amplifier output terminal	15	CH2-OUT-	CH2 negative output terminal
2	CH4-IN	CH4 input terminal	16	CH2-OUT+	CH2 positive output terminal
3*	CH4-IN'	CH4 gain adjustment input terminal	17	CH1-OUT-	CH1 negative output terminal
4	CTL1	Control 1 input terminal	18	CH1-OUT+	CH1 positive output terminal
5	CTL2	Control 2 input terminal	19	CH1-IN	CH1 input terminal
6	FWD	Tray forward input terminal	20	CH1-IN'	CH1 gain adjustment input terminal
7	REV	Tray reverse input terminal	21	VCC	VCC
8	TRAY-IN	Tray input terminal	22	CH2-IN	CH2 input terminal
9	GND	Substrate GND	23*	CH2-IN'	CH2 gain adjustment input terminal
10	CH5-OUT-	Tray negative output terminal	24*	CH3-IN	CH3 input terminal
11	COM-OUT	Tray positive terminal/CH4 negative output terminal	25*	CH3-IN'	CH3 gain adjustment input terminal
12*	CH4-OUT+	CH4 positive output terminal	26	VREF-IN	Bias amplifier input terminal
13*	CH3-OUT+	CH3 positive output terminal	27*	OPIN+	Operational amplifier non-inversion input terminal
14*	CH3-OUT-	CH3 negative output terminal	28*	OPIN-	Operational amplifier inversion input terminal

Note 1: Positive output/negative output means polarity toward input. (Ex. 18 pin output 'H' in case of 19 pin input 'H')
Note 2: Tray positive output/tray negative output means polarity toward mode. (Ex. 11 pin output 'H' in case of the forward mode)
In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



Mode Switching Table

For CTL1 and CTL2

CTL1	CTL2	CH1	CH2	CH3	CH4	CH5
L	L	OFF				ON
L	H					
H	L	ON				OFF
H	H	OFF		ON	OFF	ON

Note: Output: high impedance in case of OFF.

For F and R (CH5 control is effective only in case of ON)

F	R	Output Mode
L	L	High impedance
L	H	Reverse
H	L	Forward
H	H	Break

IC602 RH-iX1474GEZZ: SACD Data Processor (IX1474GE) (1/2)

Pin No.	Terminal Name	Input/Output	Function	Remarks
1	DPCKI	Input	Signal processing reference clock input	0.5 - 3.3Vpp, feedback resistor built in.
2	DVDD3	-	Digital power supply (3.3V)	For logic cell
3	SVCKI	Input	Servo reference clock input (Oscillation circuit input terminal)	3.3V-I/F feedback resistor built in
4*	SVCKO	Output	Servo reference clock input (Oscillation circuit input terminal)	
5	DVSS	-	Digital power supply (0V)	For logic cell
6	DVDD3	-	Digital power supply (3.3V)	For logic cell
7*	NC	-	The use forbidden	Open
8	HDWT	Input	MPU write signal	Level TTL
9	HDRD	Input	MPU read signal	Level TTL
10	HCEN	Input	MPU chip select	Level TTL
11-18	HD0-HD7	Input/Output	MPU data bus	Level TTL
19	DVSS	-	Digital power supply (0V)	For I/O cell
20	DVDD5	-	Digital power supply (5V)	For I/O cell
21	HINT	Output	MPU interrupt signal (Occurrence of interruption = "L")	OPEN DRAIN
22,23	HA0, HA1	Input	MPU address bus	Level TTL
24	PLCK	Output	Read channel clock output terminal	
25*-31*	ED0-ED6	-	For default adjustment; use by user is forbidden. (NC)	Open
32	ED7	Output	SACD 2 binary data	
33	TEST	Input	For default adjustment	Set to "L".
34	PDON	Output	PLL phase error signal output (Polarity: -)	
35	PDOP	Output	PLL phase error signal output (Polarity: +)	
36	RLLD	Output	PLL detection result output	
37	LPFN	Input	Inversion input of amplifier for PLL loop filter	
38	LPFO	Output	Output of amplifier for PLL loop filter	
39	VCOF	Output	VCO filter terminal	
40	SCLO	Output	Reference voltage output terminal of built-in comparator	
41	AVSS	-	Analog power supply (0V)	
42	AVR	Output	Non-PLL analog reference potential (1.65V)	
43	VRC	-	Resistance dividing point potential (For generating analog reference potential: 1.65)	
44	PVR	Output	PLL analog reference potential (1.65V)	
45	AVDD	-	Analog power supply (3.3V)	
46	RVR2	-	Secondary reference voltage (For connecting capacitor)	
47	RVDD	-	Dedicated power terminal (3.3V)	
48	RFIN	Input	RF signal input	
49	RVSS	-	Dedicated power terminal (0V)	
50	RVR1	-	The first reference voltage (For connecting capacitor)	
51	DVR	Input	DMO reference potential (1.65V recommended)	
52	DMO	Output	DVD disc equalizer output (Ternary PWM + Hiz)	
53	RASN	Output	External RAM column address select (Negative logic)	
54	CASN	Output	External RAM row address select (Negative logic)	
55	MOEN	Output	External RAM output enable signal	
56	MWEN	Output	External RAM read/ write select	
57	DVSS	-	Digital power supply (0V)	For logic cell
58	DVDD3	--	Digital power supply (3.3V)	For logic cell
59-68	MA9-MA0	Output	External RAM address bus	
69	DVSS	-	Digital power supply (0V)	For I/O cell
70	DVDD5	-	Digital power supply (5V)	For I/O cell
71-78	MD7-MD0	Input/Output	External RAM data bus	Level TTL
79-82	SD7-SD4	Output	MPEG data output	
83	DVSS	-	Digital power supply (0V)	For logic cell

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

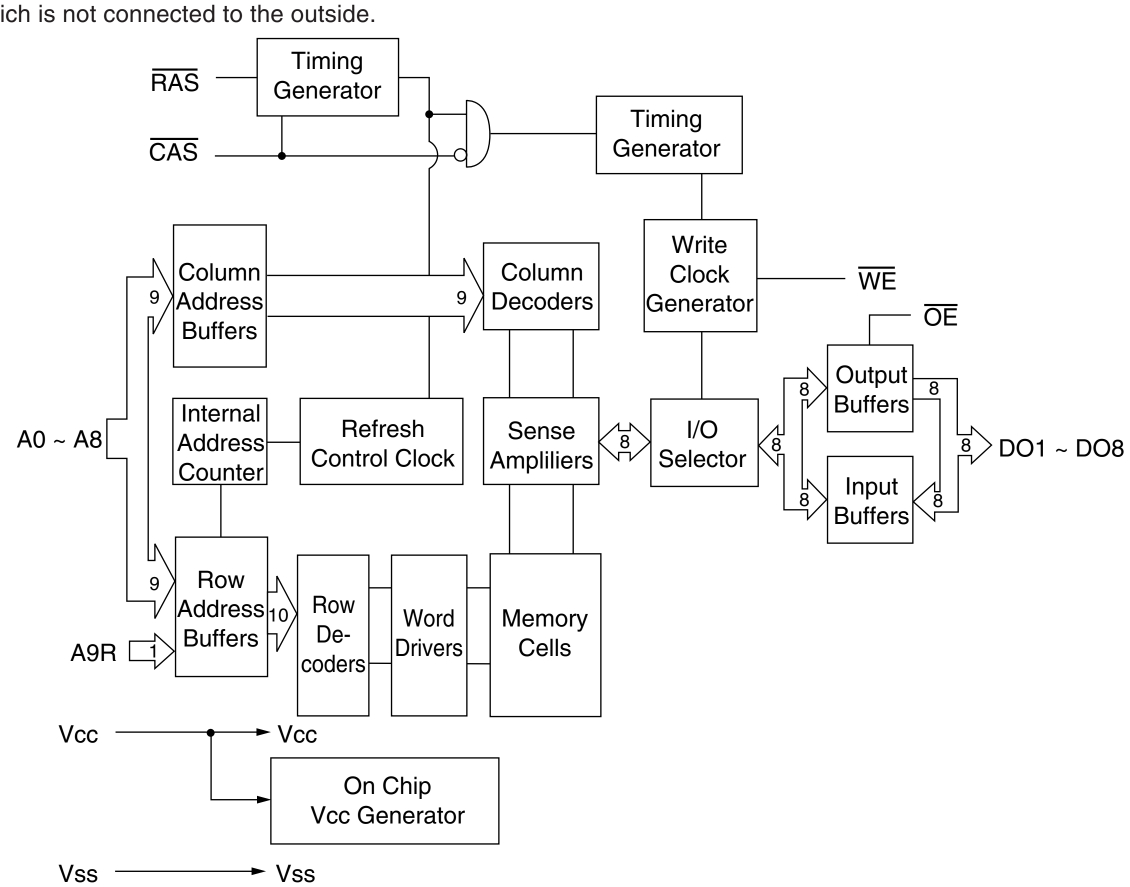
IC602 RH-iX1474GEZZ: SACD Data Processor (IX1474GE) (2/2)

Pin No.	Terminal Name	Input/Output	Function	Remarks
84	DVDD3	-	Digital power supply (3.3V)	For logic cell
85-88	SD3-SD0	Output	MPEG data output	
89	SERR	Output	MEPG data reliability flag (Data error = "L")	
90	SBGN	Output	MEPG output sector synchronous signal (Sector head = "L")	
91	SENB	Output	MEPG data effective flag (Effective = "L")	
92	SDCK	Output	MEPG data transfer clock	
93	DVSS	-	Digital power supply (0V)	For logic cell
94	SREQ	Input	MEPG data request flag (In case of request = "L")	Level TTL
95	RSTN	Input	Hard reset input (In case of reset = "L")	
96	DVDD3	-	Digital power supply (3.3V)	For logic cell
97	STDA	Output	Status data output	
98	STCK	Output	Status clock output	
99	UPWM	Output	Universal PWM output	
100	DVSS	-	Digital power supply (0V)	For logic cell

IC603 VHiSC514870SJ: 4Mbit DRAM (SC514870SJ)

Pin No.	Terminal Name	Function
10-13, 16-20, 9	A0-A8, A9R	Address input
8	$\overline{\text{RAS}}$	Row address strobe
23	$\overline{\text{CAS}}$	Column address strobe
2-5, 24-27	DQ1-DQ8	Data input/Data output
22	$\overline{\text{OE}}$	Output enable
7	$\overline{\text{WE}}$	Write enable
1	VCC	Power supply (5V)
15, 28	VSS	Ground (0V)
6*, 21*	NC	Not used

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC606 RH-iX1473GEZZ: Digital Servo (IX1473GE) (1/3)

Pin No.	Terminal Name	Input/Output	Function	Remarks
1	VSS	-	Digital ground terminal	
2	BCK	Output	Bit clock (1.4122 MHz) output terminal	
3	AOUT	Output	Audio data output terminal	
4	DOUT	Output	Digital-out output terminal	
5*	MBOV	Output	When buffer memory over signal output terminal is over: "H"	
6	IPF	Output	When AOUT output of correction flag output terminal shows the correction impossible symbol: "H"	
7*	SBOK	Output	When CRCC judgment result output terminal of sub-code Q data shows OK: "H"	
8*	CLCK	Input/Output	Can be selected by using the clock output/input terminal command bit for reading sub-code P-W data.	
9	VDD	-	Digital + power terminal	
10	VSS	-	Digital ground terminal	
11*	DATA	Output	Sub-code P-W data output terminal	
12*	SFSY	Output	Reproductive frame sync signal output terminal	
13	SBSY	Output	When sub-code sync of sub-code block sync output terminal is detected: "H" at the position of SI	
14*	SPCK	Output	Output terminal of the clock (176.4 kHz) for reading processor status signals	
15*	SPDA	Output	Processor status signal output terminal	
16*	COFS	Output	Correction frame clock (7.35 kHz) output terminal	
17*	MDNIT	Output	Can monitor DSP internal flag and PLL clock by using microcomputer commands of LSI internal signal monitor terminal	
18	VDD	-	Digital + power terminal	
19	TESIO0	Input	Test input/output terminal. Normally fixed at "L".	
20	P2VREF	-	PLL special 2VREF terminal	
21*	SPDO	Output	VCO center frequency shift terminal	
22*	PDOS	Output	Phase error (between EFM and PLCK) signal output terminal (to be used in case of 8-time speed operation)	
23	PDO	Output	Output terminal for phase error signal between EFM signal and PLCK signal	
24*	TMAXS	Output	TMAX detection result output terminal. Selected by command bit TMPS.	
25	TMAX	Output	**TMAX Detection result** / **TMAX Output** Longer than the specified frequency / "P2VEFF" Shorter than the specified frequency / "VSS" Within the specified frequency / "HiZ"	
26	LPFN	Input	Inversion input terminal of amplifier for low-pass filter	
27	LPFO	Output	Output terminal of amplifier for low-pass filter	
28	PVREF	-	VREF terminal for PLL system	
29	VCOREF	Input	VCO center frequency reference level terminal. Normally fixed at "PVREF".	
30	VCOF	Output	Filter terminal for VCO	
31	AVSS	-	Analog system ground terminal	
32	SLCO	Output	Output terminal of DAC for generating data slice level	
33	RFI	Input	RF signal input terminal	
34	AVDD	-	Analog power terminal	
35	RFCT	Input	RFRP signal center level input terminal	
36	REZI	Input	Input terminal for RFRP zero-cross	
37	RFRP	Input	RF ripple signal input terminal	
38	FEI	Input	Focus error signal input terminal	
39	SBAD	Input	Sub-beam adding signal input terminal	
40	TSIN	Input	Test input terminal. Normally fixed at "Vref".	
41	TEI	Input	Tracking error signal input terminal (Input when tracking servo is ON.)	
42	TEZI	Input	Input terminal for tracking error zero cross	
43	FOO	Output	Focus equalizer output terminal	

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC606 RH-iX1473GEZZ: Digital Servo (IX1473GE) (2/3)

Pin No.	Terminal Name	Input/Output	Function	Remarks
44	TRO	Output	Tracking equalizer output terminal	
45	VREF	-	Analog reference power terminal	
46*	RFGC	Output	Outputs 3-pole PWM signal of RF amplitude adjusting signal output terminal. (PWM carrier = 88.2 kHz)	
47	TEBC	Output	Outputs 3-pole PWM signal of tracking balance control signal output terminal. (PWM carrier = 88.2 kHz)	
48	FMO	Output	Outputs 3-pole PWM signal of feed equalizer output terminal. (PWM carrier = 88.2 kHz)	
49*	FVO	Output	Outputs speed error signal or 3-pole PWM signal of feed search EQ output terminal. (PWM carrier = 88.2 kHz)	
50	DMO	Output	To output PWM signals of 3 poles of disc equalizer output terminal. (PWM carrier = DPS 88.2 kHz, synchronizing with PXO)	
51	2VREF	-	Reference power terminal	
52	SEL	Output	Laser diode control signal	
53	FLGA	Output	FLG-A output terminal	
54	FLGB	Output	FLG-B output terminal	
55*	FLGC	Output	FLG-C output terminal	
56	FLGD	Output	FLG-D output terminal	
57	VDD	-	Power terminal	
58	VSS	-	Connected to GND.	
59-62 (60*)	IO0-IO3	Input/Output	General-purpose I/O port Can be switched to input/output port possible according to commands. In case of input port: can read terminal condition (H/L) by read commands possible. In case of output port: can control terminal condition (H/L/HiZ) by commands possible.	
63	/DMOUT	Input	Terminal for setting the mode outputting feed equalizer binary PWM from IO0 and 1 terminals and disc equalizer binary PWM from IO2 and 3 terminals. "L": active.	
64	/CKSE	-	X'tal select terminal. In case of 16.9344MHz: "H"; in case of 33.8688 MHz: "L"	
65*	/DACT	-	Test terminal	
66	TESIN	Input	Test input terminal	
67	TESIO1	Input/Output	Test input/output terminal	
68	VSS	-	Digital ground terminal	
69	PXI	Input	DSP system clock oscillation circuit input terminal	
70	PXO	Output	DSP system clock oscillation circuit output terminal	
71	VDD	-	Digital + power terminal	
72	XVSS	-	Ground terminal for system clock oscillation circuit	
73	XI	Input	System clock oscillation circuit input terminal	
74*	XO	Output	System clock oscillation circuit output terminal	
75	XVDD	-	+ power terminal for system clock oscillation circuit	
76	DVDD	-	D/A conversion section power terminal	
77*	RO	Output	Channel R data normal rotation output terminal	
78	DVSS	-	D/A conversion section analog ground terminal	
79	DVR	-	D/A conversion section reference voltage terminal	
80*	LO	Output	Channel L data normal rotation output terminal	
81	DVDD	-	D/A conversion section power terminal	
82	TEST1	Input	Test terminal Normally open	Pull-up resistor built in
83	TEST2	Input	Test terminal Normally open	Pull-up resistor built in
84	TEST3	Input	Test terminal Normally open	Pull-up resistor built in
85	BUS0	Input/Output	Data input/output terminal for microcomputer interface	Schmitt input CMOS port
86	BUS1	Input/Output		
87	BUS2	Input/Output		
88	BUS3	Input/Output		

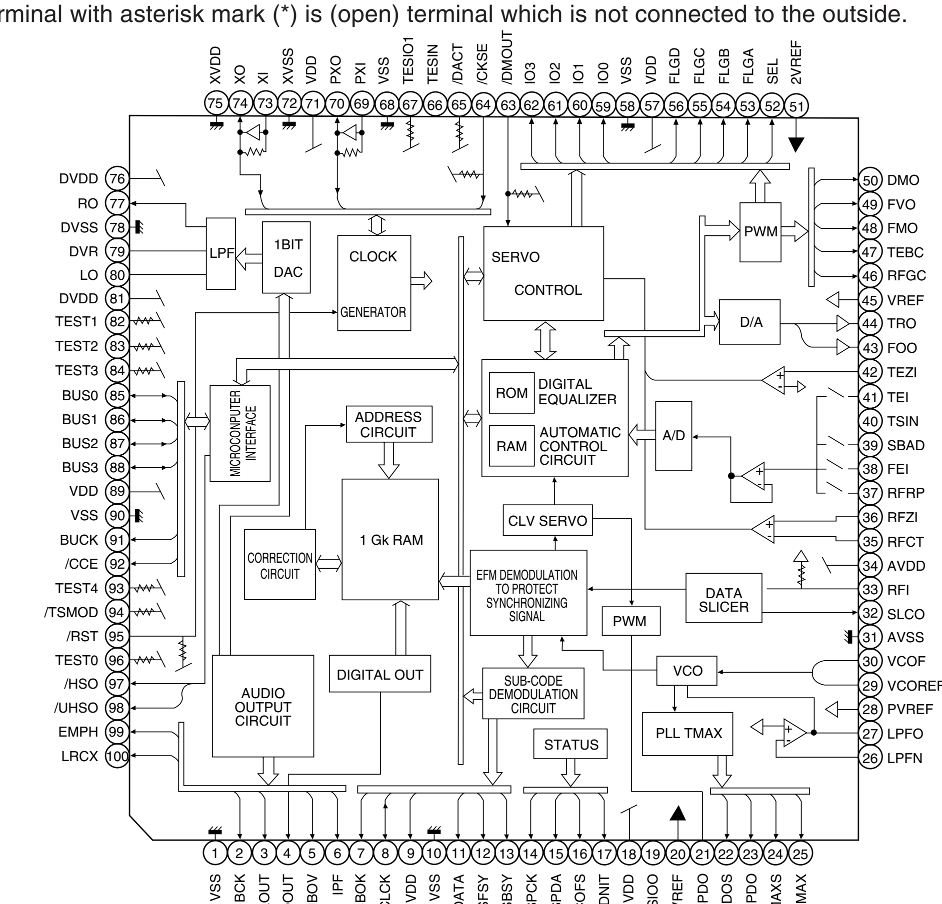
In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC606 RH-iX1473GEZZ: Digital Servo (IX1473GE) (3/3)

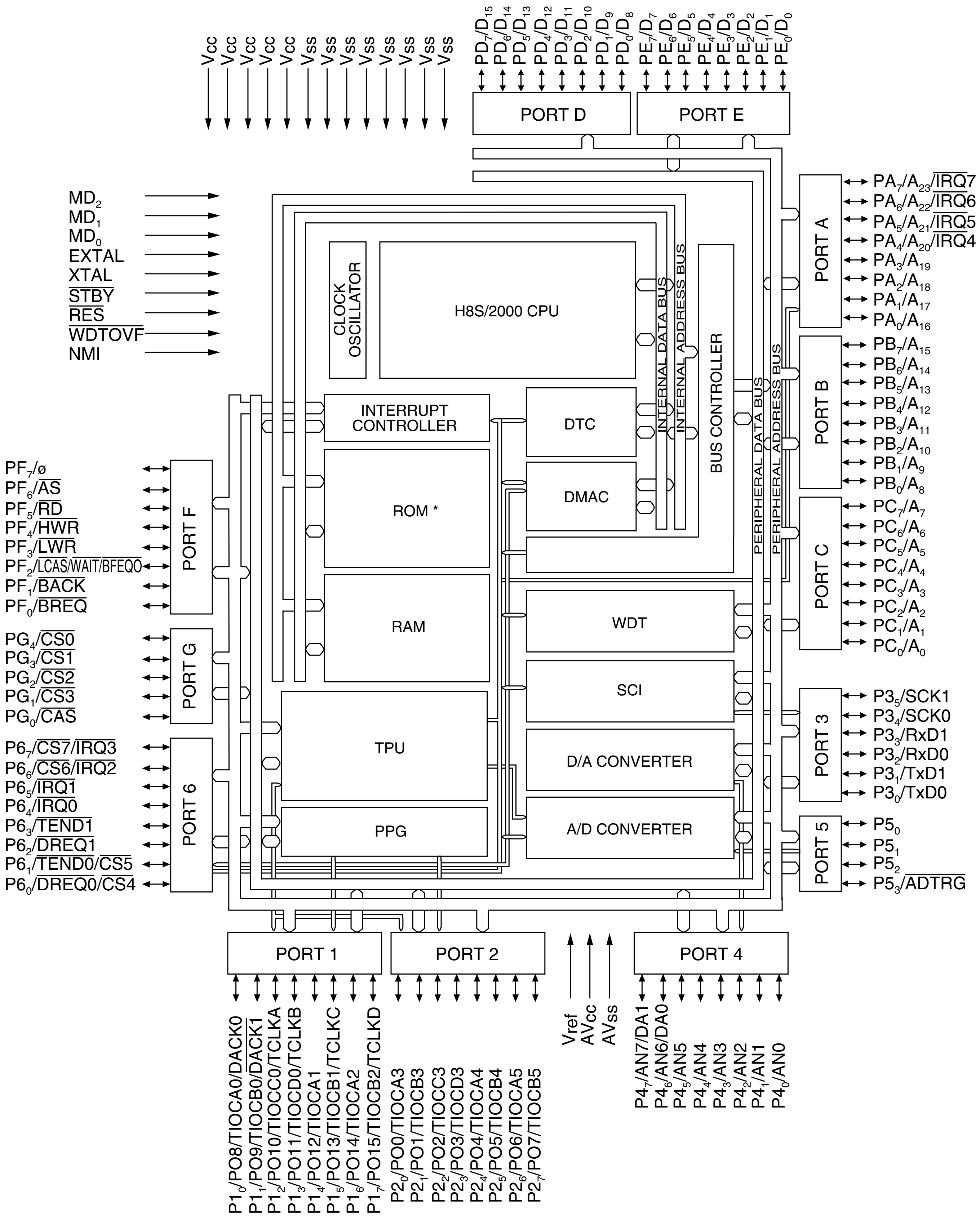
Pin No.	Terminal Name	Input/Output	Function	Remarks
89	VDD	-	Digital + power terminal	
90	VSS	-	Digital ground terminal	
91	BUCK	Input	Clock input terminal for microcomputer interface	Schmitt input
92	/CCE	Input	Chip enable signal input terminal for microcomputer interface "L": BUS0 to 3 are active.	Schmitt input
93	TEST4	Input	Test terminal Normally open	Pull-up resistor built in
94	/TSMOD	Input	Local test mode select terminal	Pull-up resistor built in
95	/RST	Input	Reset signal input terminal "L" in case of reset	Pull-up resistor built in Pull-up resistor
96	TEST0	Input	Test terminal Normally open	Pull-up resistor built in Pull-up resistor
97*	/HSO	Output	Playback speed mode flag output terminal	
98*	/UHSO	Output	(see table below)	
99	EMPH	Output	Emphasis flag output terminal for sub-code Q data H: emphasis ON, L: emphasis OFF Output polarity can be inverted according to commands	
100	LRCK	Output	Channel clock (44.1 kHz) output terminal L channel: L, R channel: H Output polarity can be inverted according to commands	

/UHSO	/HSO	Playback speed
H	H	Normal speed playback
H	L	Double speed playback
L	H	4-time speed playback
L	L	8-time speed playback

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC801 RH-iX1478GEZZ: System Microcomputer (IX1478GE)



IC802 RH-iX1535GEZZ: Input/Output Expander (IX1535GE) (1/2)

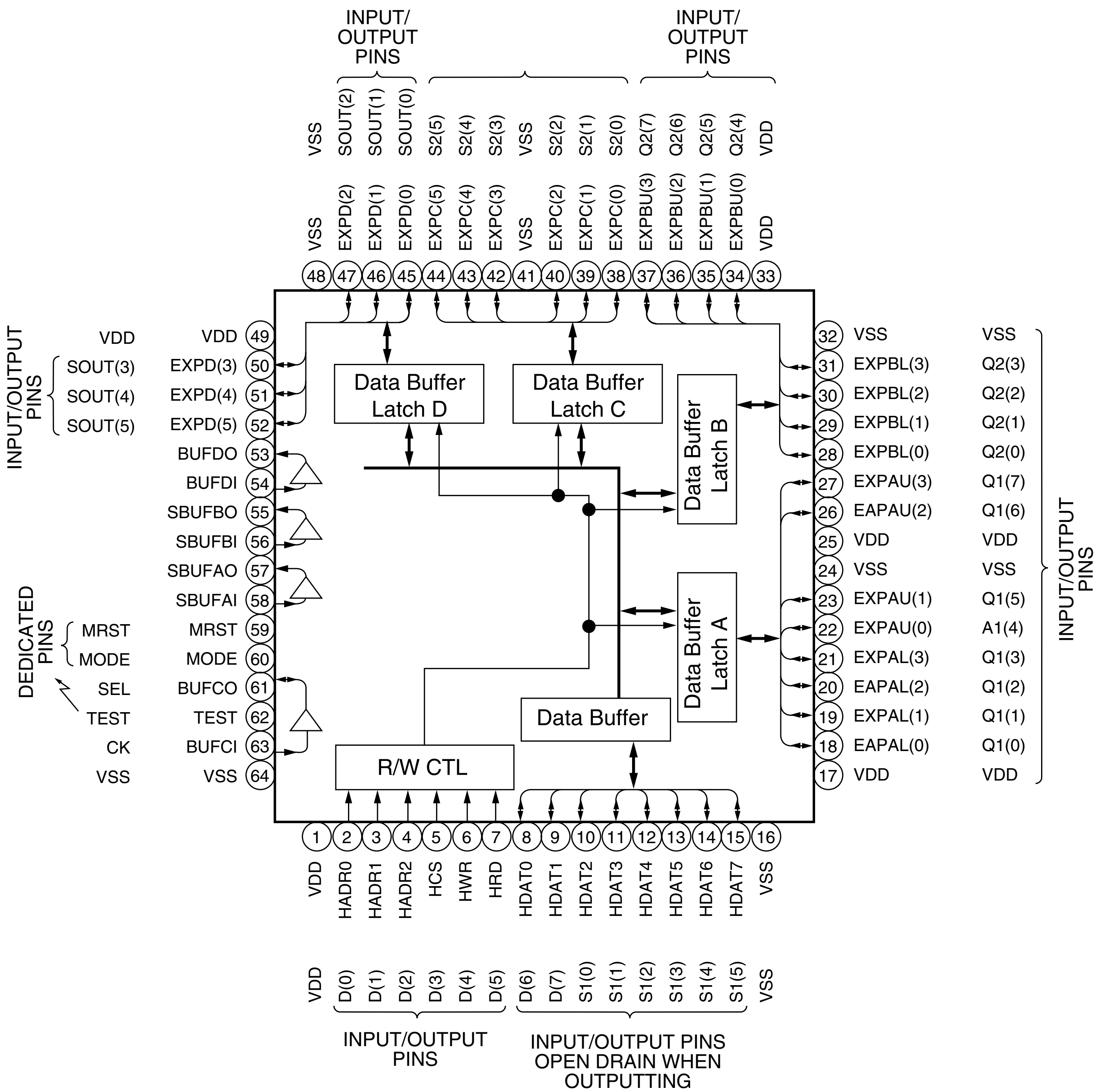
Pin No.	Terminal Name	Input/Output	Function
1	VDD	-	Power supply +3.3V
2-4	HADR0-HADR2	Input	CPU address bus
5	HCS	Input	CPU chip select
6	HWR	Input	CPU write signal
7	HRD	Input	CPU read signal
8-15	HDAT0-HDAT7	Input/Output	CPU data bus
16	VSS	-	Digital GND
17	VDD	-	Power supply +3.3V
18	EXPPAL0, SLDCK 1	Output	Driving clock output for stepping motor driver
19	EXPPAL1, SLDCK 2	Output	Mode control output for stepping motor driver
20	EXPPAL2, CW/CCW	Output	Rotating direction control output for stepping motor driver
21	EXPPAL3, DACCK	Output	Clock signal for electronic capacity IC
22	EXPPAU0, DACDT	Output	Data signal for electronic capacity IC
23*	EXPPAU1	Input/Output	General input/output terminal Gr.A
24	VSS	-	Digital GND
25	VDD	-	Power supply +3.3V
26	EXPPAU2	Input	General input/output terminal Gr.A
27	EXPPAU3	Output	General input/output terminal Gr.A
28	EXPBL0, EXTCK	Output	Control clock output to 1-bit amplifier
29	EXPBL1, EXTDO	Output	Control data output to 1-bit amplifier
30	EXPBL2, EXTST	Output	Control strobe output to 1-bit amplifier
31	EXPBL3, VOLCS	Output	Chip select signal for electronic capacity IC
32	VSS	-	Digital GND
33	VDD	-	Power supply +3.3V
34	EXPBU0, EXTDI	Input	Control data input from 1-bit amplifier
35	EXPBU1, MECSW1	Input	Tray position detection input
36	EXPBU2, MECSW2	Input	Mechanism stop mode detection input
37	EXPBU3, SMODE	Input	Operating mode set input. Opened (S-MODE)
38	EXPC0, DVD_L	Output	SACD disc inserted/CD stopped: L
39	EXPC1, SMUTE	Output	Soft mute signal for SACD decoder
40	EXPC2, AMUTE	Output	Audio mute. In case of playback/manual search
41	VSS	-	Digital GND
42	EXPC3	Input/Output	General input/output terminal Gr.C
43	EXPC4, DSDCTL	Output	Output control signal for DSD 1-bit signal
44	EXPC5, SEEK	Output	General input/output terminal Gr.C
45	EXPD0, GAIN0	Output	Gain control signal for RF pre-amplifier
46	EXPD1, GAIN1	Output	Gain control signal for RF pre-amplifier
47	EXPD2, GAIN2	Output	Gain control signal for RF pre-amplifier
48	VSS	-	Digital GND
49	VDD	-	Power supply +3.3V
50	EXPD3, MMUTE	Output	Main relay control signal. After reading disc TOC: "H"
51	EXPD4	Input/Output	General input/output terminal Gr.D
52	EXPD5, EMPH	Output	De-emphasis signal output
53	BUFDO, RST_01	Output	Buffer output D/Reset signal output for peripheral IC
54	BUFDI	Input	Buffer input D
55	SBUFBO	Output	Schmitt buffer output B
56	SBUFBI	Input	Schmitt buffer input B
57	SBUFAO	Output	Schmitt buffer output A
58	SBUFAI	Input	Schmitt buffer input A
59	MRST	Input	Reset terminal

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC802 RH-iX1535GEZZ: Input/Output Expander (IX1535GE) (2/2)

Pin No.	Terminal Name	Input/Output	Function
60	MODE	Input	Mode switching terminal. Fix at "L".
61	BUFCO	Input/Output	Buffer output C
62	TEST	Input	Test terminal. Fixed at "L".
63	BUFCI	Input	Buffer input C. Not used.
64	VSS	-	Digital GND

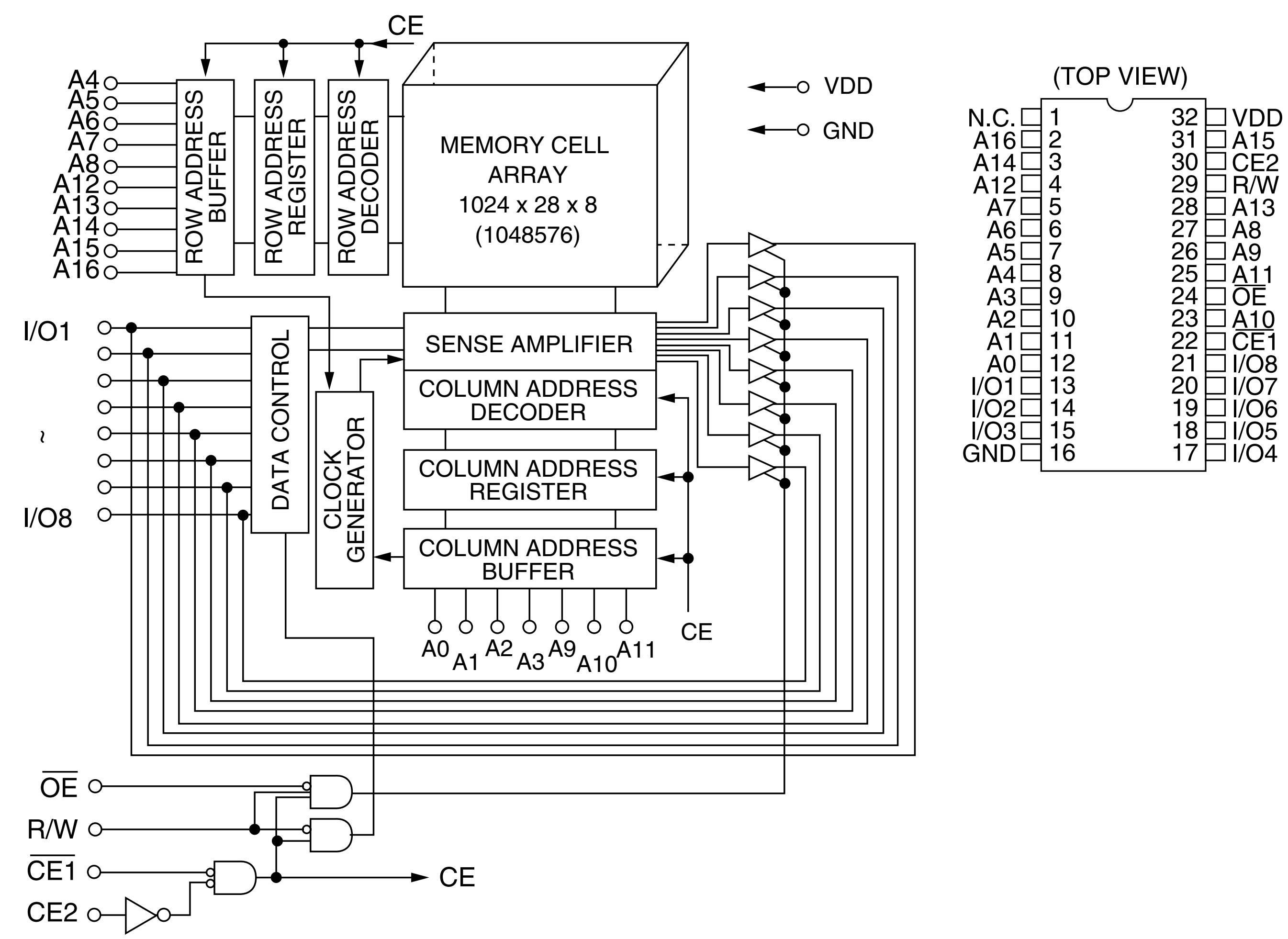
Pins 1 to 15: Simultaneous changes possible. Operating frequency: approx. 10MHz
Pins 18 to 47: Simultaneous changes possible. (Static signal) Operating frequency: approx. 1kHz
Pins 50 to 57: Simultaneous changes almost impossible. Operating frequency: approx. 1kHz



IC804 RH-iX2839AFZZ: 1Mbit SRAM (IX2839AF)

Pin No.	Terminal Name	Function
1*	NC	Not used
2	A16	Address input
3	A14	Address input
4	A12	Address input
5-12	A7-A0	Address input
13-15	I/O1-I/O3	Data input/output
16	GND	Ground
17-21	I/O4-I/O8	Data input/output
22	$\overline{CE1}$	Chip enable input
23	A10	Address input
24	$\overline{OE}$	Output enable input
25	A11	Address input
26, 27	A9, A8	Address input
28	A13	Address input
29	R/W	Read/Write input
30	CE2	Chip enable input
31	A15	Address input
32	VDD	Power terminal (+5V)

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC805 RH-iX1539GEZZ: Flash ROM (IX1539GE) (1/2)

Pin No.	Terminal Name	Input/Output	Function
1-3	A15-A13	Input	Block select addresses: Select 1/32 erase block. These addresses are latched during data entry, erase and lock block.
4-8	A12-A8	Input	Word select addresses: Select one word in 1.6k byte block. These addresses are latched during data entry.
9*, 10*	NC	-	Not used
11	WR	Input	Write enable: Controls access to command user interface, to data cue register and to address cue latch. At Low, WR is active to input address and data at leading edge.
12	/RP	Input	Reset/power-down: By setting /RP at Low, control circuit is initialized when supplying power. When supplying/breaking power, /RP pin is maintained at Low to protect data. If /RP is at Low, device is in condition of deep power down. To return from the deep power down, 480ns is required. When pin /RP is at Low, all chip operation is interrupted and reset. After return, device reads array.
13	VPP	-	Device power supply: 5.0 V
14	/WP	-	Write/Erase power supply: 5.0±0.5V is applied during the writing/erasing operation.
15	RY/BY	Output	Ready/Busy: Outputs the condition of the internal write state machine. "Low" shows the write state machine is in operation. When the machine is waiting for the next instruction to operate, interrupting erasing, or in deep power-down condition, RY/BY pin is in the float condition.
16,17	A18, A17	Input	Block select addresses: Select 1/32 erase block. These addresses are latched during data entry, erase and lock block.
18-25	A7-A0	Input	Word select addresses: Select one word in 1.6k byte block. These addresses are latched during data entry.
26	/CE	Input	Chip enable: Makes control logic, input buffer, decoder, and sense amplifier of the device active. Only when /CE is Low, chip becomes active.
27	GND	-	Ground
28	/OE	Input	Output enable: By setting /OE at Low, data are output from pin DQ. If /OE is set at High, pin DP becomes in the float condition.
29	DQ0	Input/Output	Lower byte data input/output: Data and command input during cycle of writing command user interface. Memory array, identifier, and status data output when reading various data. Float condition in case of chip non-select or output disable.
30	DQ8	Input/Output	Upper byte data input/output: The function is the same as shown in case of the lower byte data input/output above. Operating only in x16 mode. Floating in x 8 mode. DQ15/A-1: address
31	DQ1	Input/Output	Lower byte data input/output: Data and command input during cycle of writing command user interface. Memory array, identifier, and status data output when reading various data. Float condition in case of chip non-select or output disable.
32	DQ9	Input/Output	Upper byte data input/output: The function is the same as shown in case of the lower byte data input/output above. Operating only in x16 mode. Floating in x 8 mode. DQ15/A-1: address
33	DQ2	Input/Output	Lower byte data input/output: Data and command input during cycle of writing command user interface. Memory array, identifier, and status data output when reading various data. Float condition in case of chip non-select or output disable.
34	DQ10	Input/Output	Upper byte data input/output: The function is the same as shown in case of the lower byte data input/output above. Operating only in x16 mode. Floating in x 8 mode. DQ15/A-1: address
35	DQ3	Input/Output	Lower byte data input/output: Data and command input during cycle of writing command user interface. Memory array, identifier, and status data output when reading various data. Float condition in case of chip non-select or output disable.
36	DQ11	Input/Output	Upper byte data input/output: The function is the same as shown in case of the lower byte data input/output above. Operating only in x16 mode. Floating in x 8 mode. DQ15/A-1: address
37	VCC	-	Device power supply: 5.0±0.5V
38	DQ4	Input/Output	Lower byte data input/output: Data and command input during cycle of writing command user interface. Memory array, identifier, and status data output when reading various data. Float condition in case of chip non-select or output disable.
39	DQ12	Input/Output	Upper byte data input/output: The function is the same as shown in case of the lower byte data input/output above. Operating only in x16 mode. Floating in x 8 mode. DQ15/A-1: address
40	DQ5	Input/Output	Lower byte data input/output: Data and command input during cycle of writing command user interface. Memory array, identifier, and status data output when reading various data. Float condition in case of chip non-select or output disable.
41	DQ13	Input/Output	Upper byte data input/output: The function is the same as shown in case of the lower byte data input/output above. Operating only in x16 mode. Floating in x 8 mode. DQ15/A-1: address

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC901 VHiCXD2751Q-1: SACD Playback Signal Processor (CXD2751Q) (1/2)

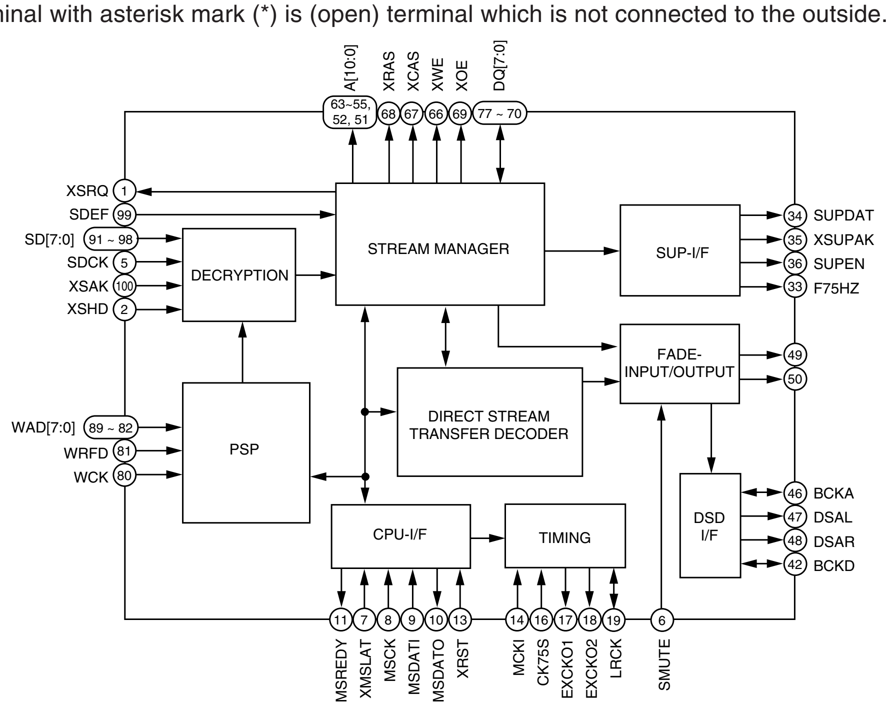
Pin No.	Terminal Name	Input/Output	Function
1	XSRQ	Output	Output terminal for data request to be input in the front end processor.
2	XSHD	Input	Input terminal for header flag to be output from the front end processor.
3	VDD	-	Power supply terminal, +3.3V
4	VSS	-	Ground terminal
5	SDCK	Input	Input terminal for data transmitting clock to be output from the front end processor
6	SMUTE	Input	Soft mute terminal H: Soft mute of audio output, L: Released
7	XMSLAT	Input	Latch input terminal for microcomputer serial communication Latches addresses and data when this terminal rises.
8	MSCK	Input	Shift clock input terminal for microcomputer serial communication Inputs and shifts the serial input data when the clock to be input in this terminal rises. Read-out data change when the clock to be input in this terminal falls.
9	MSDATI	Input	Data input terminal for microcomputer serial communication (Microcomputer -> CXD2751Q) Inputs serial data and addresses for communication.
10	MSDATO	Output	Data input terminal for microcomputer serial communication (CXD2751Q -> Microcomputer) High impedance except during output
11	MSREDY	Output	Ready-to-output flag for microcomputer serial communication. Outputs "L", if complete. Open drain.
12*	XMSDOE	Output	Data enable terminal for microcomputer serial communication Makes this terminal active when using the try state buffer outside.
13	XRST	Input	Resets entire IC when reset terminal is "L". Clock which is output from output terminals EXCKO1, EXCKO2, and LRCK does not stop during reset.
14	MCKI	Input	Master clock input terminal Inputs clock of 512Fs (22.579 MHz) or 768Fs (33.869 MHz).
15	VSS	-	Ground terminal
16	CK75S	Input	Master clock select terminal. Selects "H" in case of 768Fs and "L" in case of 512Fs.
17	EXCKO1	Output	External output clock terminal 1. Outputs 768Fs/512Fs/256Fs/128Fs according to setting.
18*	EXCKO2	Output	External output clock terminal 2. Outputs 768Fs/512Fs/256Fs/128Fs according to setting.
19*	LRCK	Input/Output	IFs (44.1kHz) clock input/output terminal. Selects master/slave according to setting.
20*	NC	-	Not used
21*	MNT2	Output	Monitor output terminal. Outputs partial internal operation according to setting.
22	TRST	Input	Reset terminal for test. Inputs power-on reset signal or fixed at "L".
23	TCK	Input	Test clock input terminal. Fixed at "L".
24*	TDI	Input	Test input terminal. Open
25*	TENA1	Input	Test input terminal. Open
26*	TDO	Output	Test input terminal. Open
27	VST	-	Test ground terminal. Connected to ground
28	VDD	-	Power supply terminal, +3.3V
29	VSS	-	Ground terminal
30*, 31*	MNT1, MNT0	Output	Monitor output terminal. Outputs partial internal operation according to setting.
32*	XBIT	Output	DST related monitor terminal. Not connected.
33*	F75HZ	Output	75Hz clock output terminal
34*	SUPDAT	Output	Supplementary data serial output terminal
35*	XSUPAK	Output	Supplementary data effective flag terminal Outputs "L" when supplementary data are effective.
36*	SUPEN	Output	Supplementary data byte-unit enable output terminal Changes to "H" at the break of 1 byte (8 bits) of serial data.
37	TEST1	Input	Test input terminal. Fixed at "L".
38	VSS	-	Ground terminal
39	TEST2	Input	Test input terminal. Fixed at "L".
40, 41	VSS	-	Ground terminal
42*	BCKD	Input/Output	Phase reference signal input/output terminal for DSD data phase modulation output Input/output according to setting
43*-45*	NC	-	Not used

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

IC901 VHiCXD2751Q-1: SACD Playback Signal Processor (CXD2751Q) (2/2)

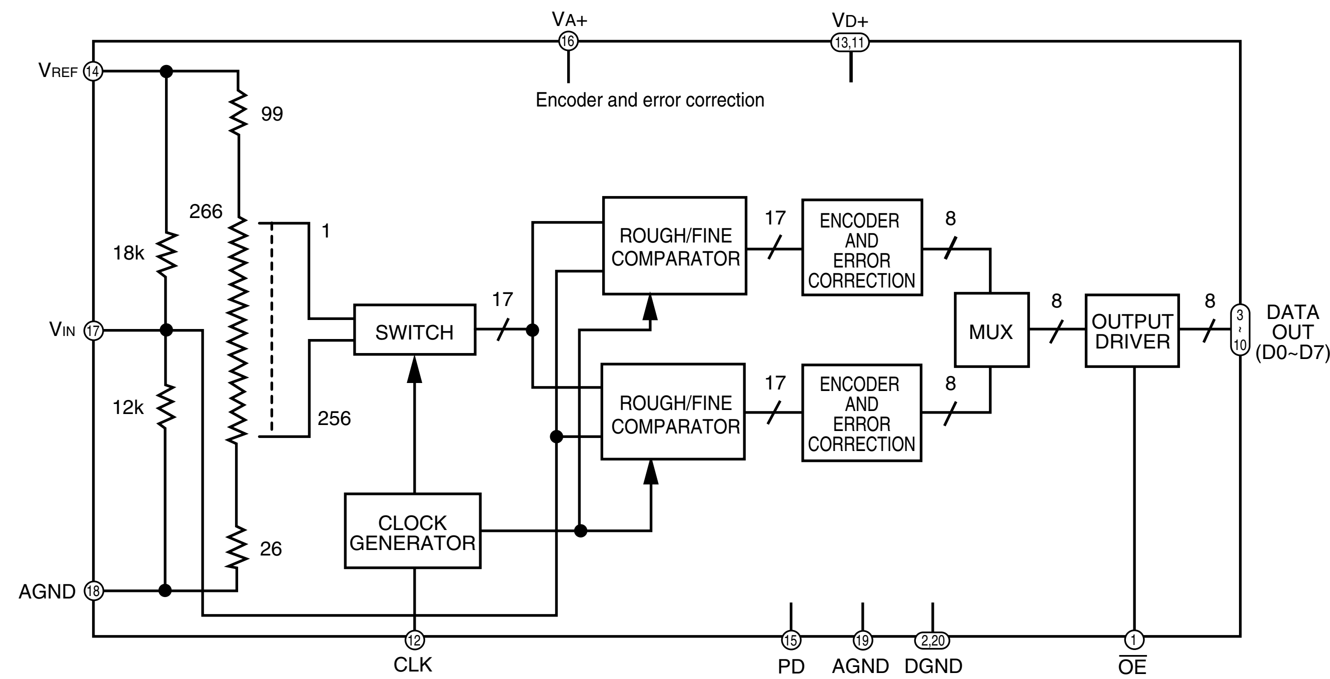
Pin No.	Terminal Name	Input/Output	Function
46	BCKA	Input/Output	Shift clock input/output terminal for DSD data output. Input/output according to setting.
47	DSAL	Output	Lch-DSD data output terminal. Phase modulation output according to setting.
48	DSAR	Output	Rch-DSD data output terminal. Phase modulation output according to setting.
49	ZDFLGL	Output	Lch zero data detection flag. "H": when silent data continue for 300msec.
50	ZDFLGR	Output	Rch zero data detection flag. "H": when silent data continue for 300msec.
51	A0	Output	DRAM address output terminal (LSB)
52	A1	Output	DRAM address output terminal
53	VDD	-	Power supply terminal, +3.3V
54	VSS	-	Ground terminal
55-62	A2-A9	Output	DRAM address output terminal
63	A10	Output	DRAM address output terminal (MSB)
64*	NC	-	Not used
65	VSS	-	Ground terminal
66	XWE	Output	DRAM write enable output terminal. Connected to WE terminal of DRAM.
67	XCAS	Output	DRAM column address strobe output terminal. Connected to CAS terminal of DRAM.
68	XRAS	Output	DRAM row address strobe output terminal. Connected RAS terminal of DRAM.
69	XOE	Output	DRAM read enable output terminal. Connected OE terminal of DRAM.
70-77	DQ0-DQ7	Input/Output	DRAM data input/output terminal
78	VDD	-	Power supply terminal, +3.3V
79	VSS	-	Ground terminal
80	WCK	Input	Operation clock for detecting PSP physical disc mark. Inputs 27.00MHz.
81	WRFD	Input	RF data input terminal for detecting PSP physical disc mark Inputs RF data made binary by slicer.
82	WAD0	Input	A/D data input/output terminal for detecting PSP physical disc mark (LSB)
83-88	WAD1-WAD6	Input	A/D data input/output terminal for detecting PSP physical disc mark
89	WAD7	Input	A/D data input/output terminal for detecting PSP physical disc mark (MSB)
90	VSS	-	Ground terminal
91	SD7	Input	Input terminal for stream data to be output from the front end processor (MSB)
92-97	SD6-SD1	Input	Input terminal for stream data to be output from the front end processor
98	SD0	Input	Input terminal for stream data to be output from the front end processor (LSB)
99	SDEF	Input	Input terminal for error flag to be output from the front end processor
100	XSAK	Input	Input terminal for data effective flag to be output from the front end processor

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.



IC902 VHiADC08351-1: A/D Converter (ADC08351)

Pin No.	Terminal Name	Function
1	$\overline{OE}$	CMOS/TTL compatible digital input terminal. When this terminal is set to Low, digital output of ADC08351 becomes enable. When this terminal is set to High, digital output changes to the high-impedance condition.
2	DGND	Ground return circuit terminal for digital power supply.
3-10	D0-D7	Conversion data output terminal. C0 shows LSB, and D7 shows MBS. Effective data are output on data bus immediately after CLK input rising edge. When $\overline{OE}$ terminal is set to Low, these terminals become enable.
11	VD	Positive digital power voltage terminal. Connected to +3V power supply. VA and VD are supplied from the common power supply.
12	CLK	CMOS/TTL compatible clock input terminal. VIN is sampled at CLK input trailing edge.
13	VD	Positive digital power voltage terminal. Connected to +3V voltage power.
14	VREF	Positive reference voltage input terminal. Voltage of this terminal ranges from 0.75V to VA.
15	PD	CMOS/TTL compatible digital input terminal. When this terminal is set to High, ADC08351 enters the power down mode, minimizing power consumption. When this is set to Low, the device enters the normal operation mode.
16	VA	Positive analog power voltage terminal: To connect +3V voltage power.
17	VIN	Analog signal input. Convertible input ranges from 0.5Vp-p to 0.68Va.
18, 19	AGND	Ground return circuit terminal for analog power supply.
20	DGND	Ground return circuit terminal for digital power supply.



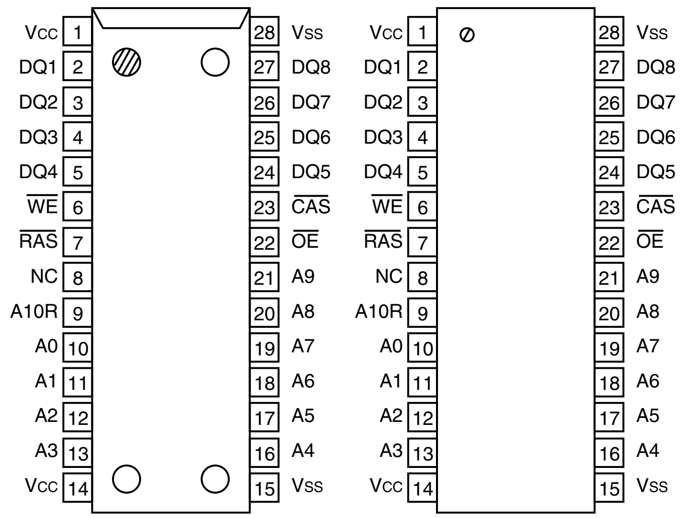
IC903 RH-iX2840AFZZ: 16Mbit SDRAM (IX2840AF)

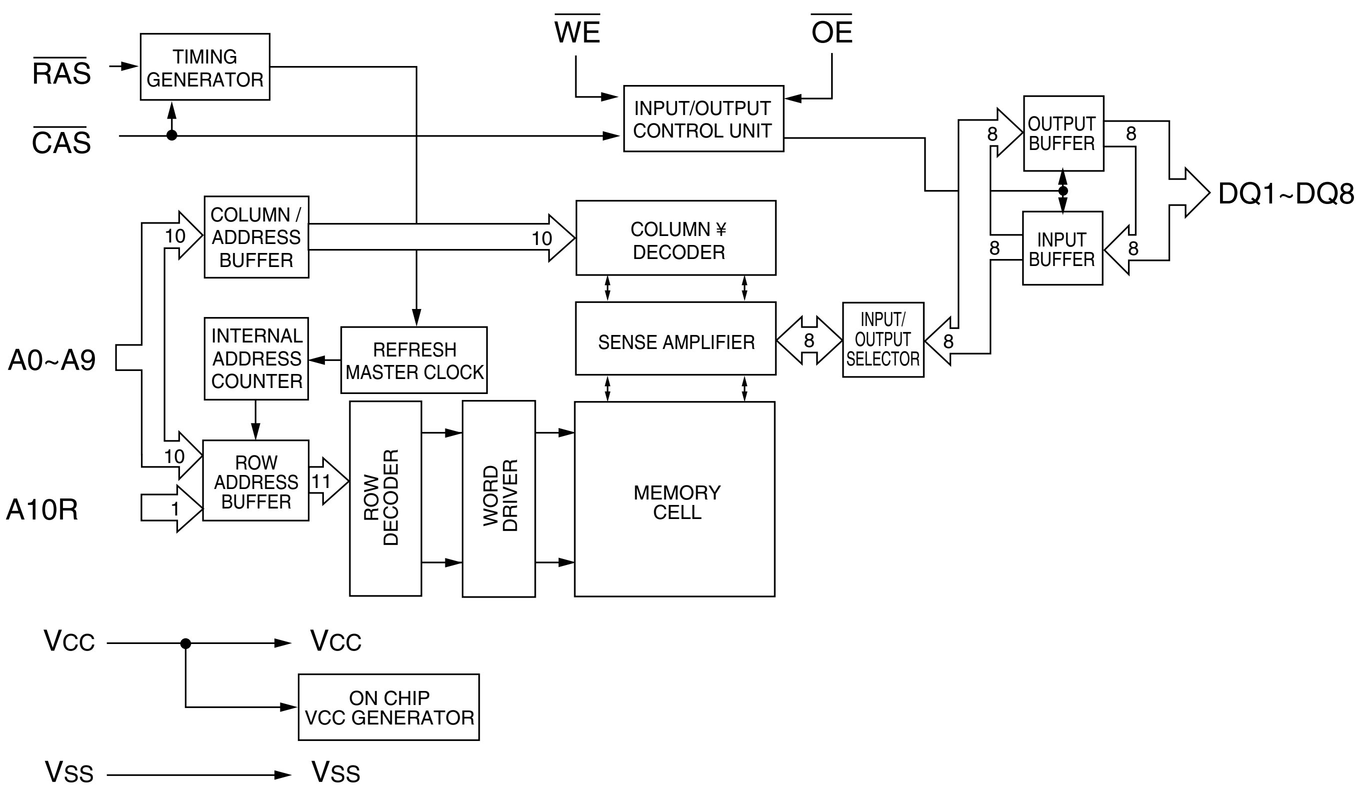
Pin No.	Terminal Name	Function
1	VCC	Power supply (3.3V)
2-5	DQ1-DQ4	Data input/output
6	WE	Write enable
7	RAS	Row address strobe
8*	NC	Not used
9	A10R	Address input
10-13	A0-A3	Address input
14	VCC	Power supply (3.3V)
15	VSS	Ground (0V)
16-21	A4-A9	Address input
22	OE	Output enable
23	CAS	Column address strobe
24-27	DQ5-Q8	Data input/output
28	VSS	Ground (0V)

In this unit, the terminal with asterisk mark (*) is (open) terminal which is not connected to the outside.

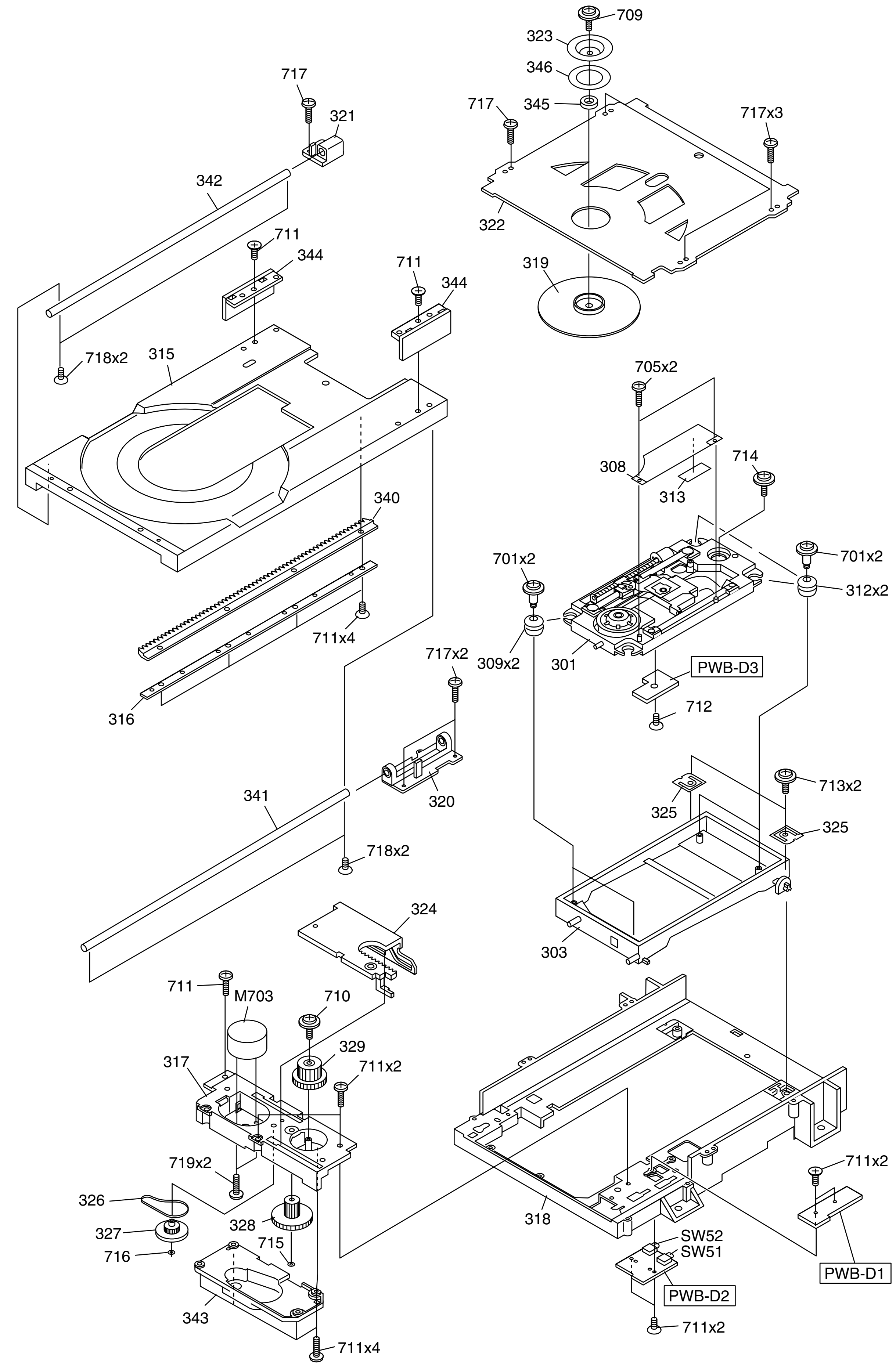
28 pin plastic SOJ

28 pin plastic TSOP (Type K)





2.6 EXPLODED VIEW AND PARTS LIST



2.7 ELECTRICAL PARTS LIST

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
301		9965 000 06889	SACD MECHAMISM ASSY MOTOR DC <=37.5W	*ZZ001620R
303		9965 000 06890	HOLDER, STEEL MECHANISM	392K271200
309		9965 000 06891	SHOCK ABSORBER FLOAT RUBBER	392K130200
312		9965 000 06892	SHOCK ABSORBER FLOAT RUBBER	392K130210
315		9965 000 06893	TRAY, STEEL TRAY	392K163200
319		9965 000 06894	DISC, STEEL STABILIZER	392K104200
320		9965 000 06895	HOLDER, STEEL SHAFT A	392K106200
321		9965 000 06896	HOLDER, STEEL SHAFT B	392K106210
323		9965 000 06897	PLATE, STEEL YOKE	392K104210
324		9965 000 06898	LEVER, STEEL LIFT	392K354200
325		9965 000 06899	SPRING HOLD	392K116200
326		9965 000 06900	BELT, DRIVING TIMING	392K264200
327		9965 000 06901	PULLEY, STEEL	392K262200
328		9965 000 06902	TOOTHED WHEEL GEAR	392K058200
329		9965 000 06903	TOOTHED WHEEL TRAY GEAR	392K058210
340		9965 000 06904	GEAR TRAY RACK GEAR	392K058220
345		9965 000 06905	MAGNET	392K305200
346		9965 000 06906	DISC, PLASTIC HIMELON SHEET	392K107200
709		9965 000 06907	SCREW, STEEL	392K010200
M703		9965 000 06908	LOADING MOTOR ASSY MOTOR DC <=37.5W	*ZZ001630R
PWB-D1-D3		9965 000 06909	PR.CIRCUIT, COMPACT DISC TRAY SENSOR/SWITCH/ PICKUP IN S	*ZZ001650R

POS. NO	VERS. COLOR	PART NO. (FOR PCS)	DESCRIPTION	PART NO. (MJI)
CNP 501		9965 000 06886	CONNECTOR, PLUG 4P	*YP200040R
CNS 501		9965 000 06887	CONNECTOR, SOCKET 30P	*YJ002240R
CNS 502		9965 000 06888	CONNECTOR, SOCKET 11P	*YJ002250R
D0501		9965 000 06882	DIODE, RB521S30 POWER RECTIFIER	*HZ200150R
D0502		9965 000 06882	DIODE, RB521S30 POWER RECTIFIER	*HZ200150R
D0503		9965 000 06882	DIODE, RB521S30 POWER RECTIFIER	*HZ200150R
D0504		9965 000 06882	DIODE, RB521S30 POWER RECTIFIER	*HZ200150R
D0505		9965 000 06882	DIODE, DAP202U POWER RECTIFIER	HZ20001210
D0801		9965 000 06882	DIODE, DAN202K POWER RECTIFIER	HZ20002210
D0802		9965 000 06882	DIODE, DAP202U POWER RECTIFIER	HZ20001210
DZ501		9340 548 52115	DIODE, PDZ5.1B REFERENCE	*HZ300050R
FL801		9965 000 06884	FILTER, CERAMIC 20MHz	*FQ000510R
IC501		9965 000 06864	IC TA1244FN I/V CONVERTER	*HC106400R
IC502		9965 000 06865	PROCESSOR IX1517GE RF SIGNAL	*HC106410R
IC503		9965 000 06866	IC IX2842AF STEPPING MOTOR DRIVER	*HC106430R
IC504		9965 000 06867	IC NJM234V SPINDLE MOTOR DRIVER	*HC106440R
IC506		9965 000 06868	IC BA6796FP LOADING/FOCUS/TRACKING/ SPIN/SLED DRIVER	*HC106450R
IC507		9965 000 06869	IC NJM2904M ANA SWITCH	*HC106470R
IC601		9965 000 06870	IC AD8052AR ANA AMPLIFIER	*HC106480R
IC602		9965 000 06871	PROCESSOR IX1474GE SACD DATA	*HC106490R
IC603		9965 000 06872	IC SC514870SJ 4M DRAM	*HC106500R
IC606		9965 000 06873	IC IX1473GE DIGITAL SERVO	*HC106510R
IC801		9965 000 06874	IC IX1478GE SYSTEM MICROCOMPUTER	*HC106520R
IC802		9965 000 06875	IC IX1535GE INPUT/OUTPUT EXPANDER	*HC106530R
IC803		4822 209 13204	IC PST9129N RESET	*HC106540R
IC804		9965 000 06876	IC IX2839AF 1M SRAM	*HC106550R
IC805		9965 000 06877	IC IX1539GE FLASH ROM	*HC106560R
IC901		9965 000 06878	PROCESSOR CXD2751Q SACD PLAYBACK SIGNAL	*HC106570R
IC902		9965 000 06879	IC ADC08351 A/D CONVERTER	*HC106580R
IC903		9965 000 06880	IC IX2840AF SDRAM	*HC106590R
PH051		9965 000 06883	COUPLER, OPTO/PHOTO RP1222	*HC200100R
PH052		9965 000 06883	COUPLER, OPTO/PHOTO RP1222	*HC200100R
PH053		9965 000 06883	COUPLER, OPTO/PHOTO RP1222	*HC200100R
Q0501		4822 130 60729	DIG.TRS, <1W DTC124EK	*BA001040R
Q0502		4822 130 60729	DIG.TRS, <1W DTC124EK	*BA001040R
Q0503		4822 130 60729	DIG.TRS, <1W DTC124EK	*BA001040R
Q0504		9965 000 06881	DIG.TRS, <1W 2SA1955A	*HX100080R
Q0505		9965 000 06881	DIG.TRS, <1W 2SA1955A	*HX100080R
Q0601		4822 130 60729	DIG.TRS, <1W DTC124EK	*BA001040R
Q0602		4822 130 60326	DIG.TRS, <1W DTA144EK	*BA001050R
Q0801		4822 130 60729	DIG.TRS, <1W DTC124EK	*BA001040R
X0601		9965 000 06885	CRYSTAL 54000MHz	*JX000710R